U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2013-0100-EA

CASEFILE/PROJECT NUMBER: COC-65825

PROJECT NAME: Mesa CBU 24-9-398 Well

LEGAL DESCRIPTION: T3N R98W NESE Section 24

APPLICANT: Mesa Energy Partners

PURPOSE & NEED FOR THE ACTION:
The purpose of the Proposed Action is to manage the exploration and development of mineral resources on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values. The need for the action is established by national mineral leasing policies and the regulations that enforce them that recognize the statutory right of lessees to develop Federal mineral resources so long as undue and unnecessary environmental degradation does not occur.

Decision to be Made: The Bureau of Land Management (BLM) will decide whether or not to approve the Application for Permit to Drill (APD) and associated road re-route and pipeline, and if so, under what conditions.

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:

Scoping: Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on July 16, 2013. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on July 16, 2013.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction:
A Notice of Staking (NOS) was submitted to the WRFO in Meeker, CO on February 10, 2012, for this location. An onsite meeting was held on April 4, 2012. Following the onsite, at the request of the BLM-WRFO, the originally-staked drill site location was moved slightly SE to its

current location in order to minimize cut/fill as much as possible. Road maintenance and upgrades to the BLM Road 1509 were discussed in DOI-BLM-CO-110-2012-0008-EA.

Proposed Action:
Mesa Energy Partners (MEP) is proposing to drill an exploratory well at T3N R98W NESE Section 24. This well will be directionally drilled in order to abide by having the bottom hole at least 660 feet from the lease line. This well pad will be for a single well with the dimensions of 320 feet by 400 feet for a 2.94 acre well pad with a disturbance of 5.3 acres for the pad area when including the storm water features (Figure 1).

Access to this pad will be off of Rio Blanco County (RBC) Road 77 and then BLM Road 1509, maintenance and upgrades will occur on BLM Road 1509. Maintenance and upgrades to BLM Road1509 were previously discussed in DOI-BLM-CO-110-2012-0008-EA. BLM Road 1509 will go directly to the pad and will then have to be re-routed around the pad for approximately 1,000 feet. The majority of this re-route will be off lease. The re-route of BLM 1509 would require construction width of no more than 50 feet and a running surface of 16 feet.

The proposed pipeline will run along the edge of the road where it will tie in to an existing line. When calculating the disturbance as a construction width of 50 feet minus the running width of 16 feet for BLM Road 1509 the pipeline disturbance will be approximately 7.8 acres.

Table 1: Table showing the approximate disturbance in acres during the phases of the well location.

	Proposed Disturbance	**After Interim Reclamation**	**After Final Reclamation**
Well Pad Location	5.3 ac	1.0 ac	0.0 ac
Access Road Re-route	1.2 ac	0.4 ac	0.0 ac
Pipeline	7.8 ac	0.0 ac	0.0 ac
Total	**14.3 ac**	**1.4 ac**	**0.0 ac**

Design Features:
The Surface Use Plan of Operations (SUPO) (Attachment 1) is incorporated as a design feature of the Proposed Action. In addition, Mesa has agreed to the following:

1. Mesa Energy Partners is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.

2. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. Mesa Energy Partners will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. Mesa Energy Partners,

under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

3. Pursuant to 43 CFR 10.4(g), Mesa Energy Partners must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), Mesa Energy Partners must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

4. Mesa Energy Partners is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.

5. If any paleontological resources are discovered as a result of operations under this authorization, Mesa Energy Partners or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

6. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock. Mesa Energy Partners is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.

7. All activities would be required to comply with all applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, implementing all applicable mitigation measures required by each permit, and effectively coordinating with existing facility ROW holders.

8. The holder shall provide the BLM AO with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure, (as-built maps) within 60 days of construction completion. Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in Universal Transverse Mercator

(UTM) Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

9. At mile marker 3.3 the operator has committed to install a 36 inch culvert.

No Action Alternative:
The Mesa CBU 24-398-9 well would not be drilled, constructed or maintained, and the associated road re-route and associated pipeline would not be constructed or maintained.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (White River ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

Standards for Public Land Health: In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis (EA). These findings are located in specific elements listed below.

Cumulative Effects Analysis Assumptions: Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Table 2 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Natural Resources Conservation Service (NRCS) 5th Level Watershed. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

Table 2. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horses	No	No	No
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Oil Shale	X	X	X
Seismic	X	X	X
Vegetation Treatments	X	X	X

Affected Resources:

The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 3 lists the resources considered and the determination as to whether they require additional analysis.

Table 3. Resources and Determination of Need for Further Analysis

Determination[1]	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	See discussion below.
PI	Geology and Minerals	See discussion below.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
Biological Resources		

Determination[1]	Resource	Rationale for Determination
PI	Wetlands and Riparian Zones*	See discussion below.
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
PI	Special Status Animal Species*	See discussion below
NP	Special Status Plant Species*	Special Status Plant Species (SSPS) surveys were conducted for the wellpad and no plants or habitat was found. Surveys were not required for the access road or pipeline.
PI	Migratory Birds	See discussion below.
PI	Aquatic Wildlife*	The potential effects of the Proposed Action on native (non-special status) fish species are adequately represented by the discussion for endangered Colorado River fish in the Special Status Animal Species section.
PI	Terrestrial Wildlife*	See discussion below.
NP	Wild Horses	The Proposed Action is not located within a designated Herd Management Area (HMA). A designated HMA is located approximately 4.5 miles to the south on the south side of the White River of the Proposed Action.
Heritage Resources and the Human Environment		
PI	Cultural Resources	See discussion below.
PI	Paleontological Resources	See discussion below.
NP	Native American Religious Concerns	No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute Tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.
PI	Visual Resources	See discussion below.
PI	Hazardous or Solid Wastes	See discussion below.
PI	Fire Management	See discussion below.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
NP	Lands with Wilderness Characteristics	There are no lands identified as having wilderness characteristics within four miles of the Proposed Action.
Resource Uses		
PI	Forest Management	See discussion below.

Determination[1]	Resource	Rationale for Determination
PI	Rangeland Management	See discussion below.
PI	Floodplains, Hydrology, and Water Rights	See discussion below.
PI	Realty Authorizations	See discussion below.
PI	Recreation	See discussion below.
PI	Access and Transportation	See discussion below.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
Special Designations		
NP	Areas of Critical Environmental Concern	The nearest Area of Critical Environmental Concern (ACEC) is White River Riparian ACEC and it is 2.6 miles to the southwest of the project.
NP	Wilderness	There are no Wilderness Study Areas or Wilderness areas within ten miles of the Proposed Action.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO.
NP	Scenic Byways	There are no Scenic Byways within the project area.

[1] NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.
* Public Land Health Standard

AIR QUALITY

Affected Environment: The Proposed Action is located within the White River Basin which is an attainment area for national and state air quality standards. The attainment designation means that no violations of ambient air quality standards have been documented in the area (EPA 2013). The Proposed Action is located more than 10-miles from any non-attainment or special designation airshed. Non-attainment areas are designated by U.S. Environmental Protection Agency (EPA) as having air pollution levels that persistently exceed the national ambient air quality standards (NAAQS). The closest non-attainment areas are along the Front Range corridor in Colorado and are in non-attainment for ozone. The closest special designation areas are Dinosaur National Monument, which is located northwest of the project area (designated Class II airshed with Prevention of Significant Deterioration (PSD) with thresholds for sulfur oxides and visibility), and the Flat Tops Wilderness Area located east of the Proposed Action (designated Class I).

Projects that could impact special designation areas and/or non-attainment areas may require special consideration from the Colorado Department of Public Health and Environment (CDPHE) and the EPA. General conformity regulations require that federal activities do not cause or contribute to a new violation of NAAQ standards; that actions do not cause additional or worsen existing violations of the NAAQ standards; and that attainment of these standards is not delayed by federal actions in non-attainment areas.

The Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) to set NAAQS (40 CFR part 50) for criteria pollutants. Criteria pollutants are air contaminants that are commonly emitted from a majority of emissions sources and include carbon monoxide (CO), lead (Pb), sulfur dioxide (SO_2), particulate matter smaller than 10 and 2.5 microns (PM_{10} & $PM_{2.5}$), ozone (O_3), and nitrogen dioxide (NO_2).

The CAA established 2 types of NAAQS:

- Primary standards: – Primary standards set limits in order to protect public health, including the health of "sensitive" populations (such as asthmatics, children, and the elderly).
- Secondary standards: – Secondary standards set limits in order to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and buildings.

The EPA regularly reviews the NAAQS (every five years) to ensure that the latest science on health effects, risk assessment, and observable data such as incidence rates are evaluated. The Colorado Air Pollution Control Commission (CAPCC), by means of an approved State Implementation Plan (SIP) and/or delegation by EPA, can established state ambient air quality standards for any criteria pollutant that are at least as stringent as, or more so, than the federal standards. Ambient air quality standards must not exceed Colorado Ambient Air Quality Standards (CAAQS) and NAAQS in areas where the general public has access.

The Proposed Action is in Rio Blanco County within the Western Counties Monitoring Region of Colorado (APCD 2010). Local air quality parameters including particulates and ozone are measured at monitoring sites located at Meeker, Rangely, Dinosaur, and near the Flat Tops Wilderness Area. Ozone data have been collected at Federal reference air quality sites supported by the BLM since 2010 and located outside Meeker and Rangely. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness, northeast of the Project Area. IMPROVE sites measure visibility impairment from air borne particles.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would result in low and short-term impacts on air quality. Implementation of the Proposed Action would result in emissions of criteria pollutants, hazardous air pollutants (HAPs), and greenhouse gases (GHGs). Air quality would be impacted by fuel combustion sources, such as the engine exhaust and any stationary fuel combustion sources during drilling and completion activities. Emissions of particulate matter would be generated from construction, drilling and during the production phase. Increases in the following criteria pollutants would occur due to combustion of fossil fuels: carbon monoxide, nitrogen dioxide, sulfur dioxide, and ozone (a secondary pollutant formed photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NOx)). Ozone advisories and alerts were issued in the winter of 2011 and 2013 for Rio Blanco County based on data collected from the Rangely monitoring site.

Ozone can cause breathing difficulties and worsen respiratory infections especially in the elderly, the young and those with pre-existing ailments such as asthma. Ozone also affects vegetation and ecosystems, leading to reductions in agricultural crop and commercial forest yields, reduced growth and survivability of tree seedlings, and increased plant susceptibility to disease, pests, and other environmental stresses (e.g., harsh weather). Generation of ozone under stagnate air masses, with continuous snow cover or in regions with soils with a low albedo can increase dramatically. Ozone produced under stagnant air masses can be transported many miles from its point of origin. The best way to reduce ozone in the atmosphere is to reduce the compounds that form it at its point of origin and at times when conditions favor the production of ozone.

Soil disturbance resulting from construction, heavy equipment, travel on existing roads, and drill rigs is expected to cause increases in fugitive dust, specifically particulate matter (PM) 10 microns (μm) or less (PM_{10}) and particles 2.5 μm or less ($PM_{2.5}$). Fugitive dust production emissions would cause impacts to local and regional air quality. Dust production is most likely during construction and drilling activities, especially when conditions are dry and/or windy.

PM_{10} and $PM_{2.5}$ are created from windblown dust and soil from fields, agricultural crops, agricultural livestock, paved road re-entrained dust, unpaved roads, construction activities, mining and quarrying, construction sites, automobile and diesel engine exhaust, waste burning, soot from wood fires, and sulfates and nitrates from combustion sources such as industrial boilers (CAPCD 2013). Particulate matter in the air is made up of a number of components from these sources, including acidic aerosols (such as nitrates and sulfates), organic chemicals, metals, soil or dust particles, and allergens (such as fragments of pollen or mold spores). The chemical composition of $PM_{2.5}$ consists of five major components sulfate, nitrate, organic carbon (OC), elemental carbon (also called black carbon, BC), and crustal material. More so than other pollutants, PM_{10} is a localized pollutant where concentrations vary considerably due to rapid rates of deposition and dispersion.

Fine particles are efficient in scattering and absorbing light and are the major contributor to visibility problems. The effects of particulates include visibility degradation, climate change, vegetation damage and human health impacts. Once the production well goes into interim reclamation topsoil removed during road and pad construction would be redistributed and stabilized and seeded for reclamation. As vegetation establishes in the reclaimed areas, dust production will occur only when vehicles travel on the access roads to service the well. Based on data from Air Quality monitoring stations in the area, the increase in airborne particulate matter from this project is not expected to exceed CAAQ or NAAQ standards on an hourly, 8-hour average or daily basis.

In summary, soil disturbance resulting from construction of pads and roads and the drilling operations are expected to cause increase airborne fine particulate matter in the project area and may contribute to reductions in regional visibility. In addition, increases in the following criteria pollutants: carbon monoxide, VOCs, ozone, nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during drilling and production activities. Non-criteria pollutants such as carbon dioxide, methane and nitrous oxides, air toxics (e.g., benzene), total suspended particulates (TSP), and increased impacts to visibility and atmospheric deposition may also increase as a result of the Proposed Action.

Even with these increased pollutants the Proposed Action is unlikely to result in an exceedance of NAAQ or CAAQ standards, is not likely to be located in future non-attainment area, and is it likely to comply with applicable PSD increments and other significant impact thresholds.

Cumulative Effects: Air quality in Region 11 (Western slope of Colorado) is affected by both mobile and stationary emitters of air pollutant (CAPCD 2013). Fugitive dust can come from natural sources that are not preventable, such as volcanic eruptions, large regional dust storms, and wildfires. Downward trends in annual NO_2, CO, and SO_2 have been measured at air quality monitoring sites in the region and are likely the result of national emissions control programs. For example, between 1990 and 2012, national emissions of NOx and VOC emissions have declined 56 percent and 35 percent, respectively (CAPCD 2013). Decreases in SOx emissions from diesel fuel and power plants coincides with in a decrease in SO_2 measured at IMPROVE and other air quality monitoring programs. Even though concentrations of these pollutants are low and decreasing, EPA continues to track these pollutants because of their contribution to secondary air pollutants and issues (e.g., ozone, $PM_{2.5}$, and visibility).

Nationally, about 55 percent of the oxides of nitrogen emissions come from on and off-road vehicles and about 28 percent come from industrial sources (CAPCD 2013). Industrial sources of NO_2, CO, and SO_2 that affect air quality in this region include stationary source facilities such as gas compressor plants, sand and gravel pit operations. Portable industrial sources of these pollutants include facilities such as drill rigs, well completion activities, gravel crushers, and asphalt plants. Mobile (or non-point) sources of emissions within the region would include highway or on-road vehicles, off-road vehicles such as construction related equipment (track dozers, loaders, backhoes, etc.), and recreational vehicles (snowmobiles, ATVs, and dirt bikes). Smoke from grass and forest fires and natural dust events represent non-point source emissions that can also impact air quality.

In general air quality within the region is good due to few emission sources, good dispersion characteristics and national trends showing a decrease in some air pollutants. However, some emissions have caused localized or regional level increases in pollution monitoring values such as ozone and $PM_{2.5}$ within the past ten years. This has led to an increase in air quality monitoring in the region including the BLM supported Federal Reference sites in Rangely and Meeker.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No increase in impacts to air quality would occur from the No Action Alternative.

Cumulative Effects: Impacts for the Western Slope of Colorado would be similar to those described for the action alternative.

Mitigation: The following should be added as conditions of approval (COAs):

1. The operator will limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollution sources in accordance with all applicable state, federal and local air quality law and regulation.

2. The operator will treat all access roads with fresh water during construction and drilling activities so that there is not a visible dust trail behind vehicles. Mesa Energy has identified about 1,000 barrels of water per year for this purpose. The use of chemicals as a dust suppressant on BLM lands will require prior written approval from the BLM.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of the well location is the cretaceous Williams Fork Formation and is located on the northern flank of the Midland anticline (Hail 1973). During drilling potential water, coal, oil, and gas resources will be encountered from surface to the targeted zone. CBU 24-9-398 is located in an area identified in the White River ROD/RMP as having high potential for oil and gas and is outside the areas identified as suitable for coal, oil shale, and sodium leasing. Limited oil and gas exploration has occurred within a two miles radius of the proposed well. This consists of four wells: one plugged and abandoned, one producing, one waiting on completion, and one proposed (COGCC). It is located within the Coyote Basin Oil and Gas Exploratory Unit COC-65825. The nearest oil and gas field development occurs approximately five miles south of the project in the Weber Sand Participating Area COC-55102A.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Coal and water zones may be encountered during drilling and the cementing program of the Proposed Action isolates the formations and will prevent the migration of gas, water, and oil between formations including coal zones. Development of this well could deplete the hydrocarbon resources within the drainage acreage associated with reservoir characteristics in the targeted formation.

Cumulative Effects: As stated above the Colorado Oil and Gas Conservation Commission (COGCC) database identifies three nonproducing oil and gas wells within a two mile radius of well pad CBU 24-9-398. At a minimum, an additional 22 wells could be required for full field development (320 acre bottom hole spacing spacing) of the oil and gas resources in the two mile radius. This would depend on the reservoir drainage characteristics within targeted formations. Full field development could deplete the oil and gas resources of the targeted formations.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The oil and gas resources in the targeted zones would not be developed at this time and would remain available for future recovery.

Cumulative Effects: There would be no contribution to the recovery of oil gas resources.

Mitigation: None.

SOIL RESOURCES

Affected Environment: The classifications of soils within 30 meters of the proposed pad and centerlines of the access roads and pipelines that could be impacted by the Proposed Action, are shown in Table 4.

Table 4. Soil Classifications within 30 Meters of the Pad and the Centerline of Roads and Pipelines (NRCS, 2008).

Soil Classification	Surface Texture	Erosion Hazard	Rutting Hazard	Potentially Impacted (Acres)
Rentsac-Moyerson-Rock outcrop complex, 5 to 65 percent slopes	channery loam	Severe	Slight	24
Torriorthents-Rock outcrop complex, 15 to 90 percent slopes	channery loam	Severe	Severe	9
Tisworth fine sandy loam, 0 to 5 percent slopes	fine sandy loam	Moderate	Moderate	9
Glendive fine sandy loam	fine sandy loam	Moderate	Severe	3
Badland	weathered bedrock	Severe	Slight	3

Of the 48 acres analyzed, 9 acres are on saline soils on BLM Road 1509 before the crossing on Crooked Wash. The majority of the soils have a surface texture of channery loam and a severe erosion hazard. There are about 11 acres of soils with a severe rutting hazard along BLM Road 1509 and near the proposed pad. The alluvium soils adjacent to Crooked Wash and two sections of the road from the crossing to the pad have severe ratings for soil rutting.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: BLM Road 1509 gets a high amount of public use during periods when soils are saturated, especially during big game hunting seasons. This road serves as the primary access to public lands between Hwy 64 and Hwy 40 (See the *Transportation and Access* section). The existing public use of this road combined with the use of this road to access the proposed drilling pad represents a challenge for road design and maintenance. The crossing on Crooked Wash has been stable and is an acceptable design for low volumes of light vehicle use, but would not handle heavier truck traffic required for the Proposed Action. During the onsite, the BLM requested an engineered low water crossing for Crooked Wash and an engineered road design for the access road; these engineering designs are part of the SUPO for the APD.

A properly designed crossing for Crooked Wash and a well-designed access road with adequate drainage features and a stable all-weather travel surface will minimize impacts to soils. Inadequately sized culverts can cause erosion such as headcuts in drainages and may fail if they do not adequately pass water and sediment during peak storm events. This will occur when the culvert silts-in and another storm event overtops the culvert; these events can cause failure of the road and erosion. Inadequately designed road drainage features can cause rutting of the travel

surface and ponding on the road surface. Continued use of roads with compromised drainage features could result in instability of soils on and near the road. Poor surface conditions on travel surfaces that can occur when only native soils are used and the native soils have poor properties for construction materials. Surfacing the road with gravel or road base can be used to augment the stability of native soils to make an all-weather surface. Instable road surfaces and road surfaces not adequate for all-weather conditions, especially on roads with steep grades, can rut and rapidly lose drainage features causing erosion and instability.

A small portion of BLM Road 1509 will be re-routed around the drilling pad to a less stable location downslope. Roads on unstable terrain typically require more maintenance and additional drainage features. There are no specifics about how the drainage features would be accomplished during the production phase in the SUPO after interim reclamation. A simpler design would be to move BLM Road 1509 to more stable terrain next to the tear-drop proposed for the production phase. Moving the access road above the 6,000 ft. contour line would be adequate to assure the stability and decreasing the maintenance needs (See Page 7 of 12 of the diagrams submitted with the SUPO (in well file)). The SUPO diagrams do not show the final location of the road (See page 8 of 12 of the diagrams submitted with the SUPO (in well file)), but if the road is moved above the 6,000 ft contour line during interim reclamation it could remain in place during final reclamation.

With proper BMPs for stormwater, engineered access roads and stream crossings, construction, reclamation and mitigation, impacts to soils outside the 30 meter buffer around surface disturbance are not expected. Final reclamation on the pipeline would likely be achieved within three to five years after installation. Road sections that are rebuilt to improve turning radius will result in new disturbance that would likely be reclaimed with salvaged topsoil and should be stable and revegetated within three to five years. Since the soil rutting hazard is severe for soil along several sections of the road and there is a portion of the road that has a 12 percent grade, surfacing access roads would improve the wear of the road surfaces and reduce the risk of increased erosion and therefore reduce impacts to soils and steep slopes adjacent to the access roads.

Direct impacts from the construction of the well pad, access road and pipeline installation would include soil compaction, removal of vegetation, exposure of subsoil, mixing of soil horizons, loss of topsoil productivity, and an increase in the susceptibility of soils to wind and water erosion. Compaction due to construction activities would reduce aeration, permeability and water-holding capacities of soils in some locations. Removal of vegetation exposes soils to erosion from rainfall, wind and surface runoff. Exposure of subsoil and mixing of soil horizons can change the physical characteristics of subsoil and may reduce the productivity of these soils before reclamation is complete. Loss of topsoil productivity can occur during soil storage due to nutrient loss through percolation of precipitation through the soils, physical loss and mixing of less productive soil layers during moving and a loss of structure. An increase in surface runoff and sedimentation could be expected from impacted soils and these soils are likely to be less resilient to erosion from surface runoff after disturbance.

These direct impacts from the Proposed Action could result in increased indirect impacts to soils off the construction sites such as increased runoff and erosion. Implementation of BMPs for

stormwater and reclamation will reduce impacts from this project and should limit impacts to construction sites. However, there is still the potential for intense storm events or BMP failures resulting in erosion off site.

Indirect impacts from this project could result in contamination of surface and subsurface soils due to unintentional leaks or spills from construction equipment, storage tanks production equipment and if these spills occurred they would affect the productivity of soils. Impacted soils would typically be removed or remediated on site and therefore loss of soil productivity would be temporary maybe three to five years.

Cumulative Effects: Well pads in Crooked Wash 5th-Level Hydrologic Unit Code are expected to be one to three well pads per section for portions of this watershed with the majority of the watershed not having any well pads. The nature of the drilling in this watershed is exploratory. Exploratory wells include surface disturbance for well pads, pipelines, roads and support facilities. Typical Exploratory wells are single well pads. Dispersed recreation (hunting) makes use of the access road to the pad and will add to the wear of the road. Use of the road during poor conditions could result in failure of drainage features and more road maintenance activities may be needed to keep this road in good shape. Livestock grazing occurs on public and private lands in the area and these activities may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and reclamation are expected in the Crooked Wash watershed. In general, soil disturbance in the Proposed Action and other activities are likely to reduce soil productivity in the localized areas of disturbance, but are unlikely to impact overall soil productivity for the long term.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No impacts to soils would occur.

Cumulative Effects: Impacts would be similar to those described for the action alternative.

Mitigation: The following should be added as conditions of approval.

1. The operator will armor the outfall below the culvert at mile marker 3.7 due to a headcut forming on the downhill side of the road.

2. The operator will notify the authorized officer at least two weeks in advance of beginning construction on the low water crossing on Crooked Wash, and for any anticipated road closures for BLM 1509. Notification will allow BLM representatives to be present during construction and allow BLM to notify the public of road closure due to construction.

3. The operator will surface the BLM 1509 road surface with gravel and/or road base from the Crooked Wash crossing to the pad and the new portion of road to reroute it around the pad, or if the running surface of the road begins to rut to a depth of 4 inches the use of the road will stop until the surface has dried. This road surfacing will be maintained by the lease holder to provide an all-weather surface on this road section until final reclamation is

completed. Maintenance will include restoring the travel surface shape, road surfacing to maintaining an effective all-weather surface during drilling and production of the wells.

4. The operator will notify the authorized office at least two weeks in advance of when the road construction will be completed. This will allow BLM to do an inspection of the road design to insure compliance with the engineering plan, SUPO, and mitigation.

Finding on the Public Land Health Standard #1 for Upland Soils: With mitigation, this action is unlikely to reduce the productivity of soils on public lands.

SURFACE & GROUND WATER QUALITY

Affected Environment: Surface Water: This project is within Crooked Wash, a tributary to the White River. Table 5 describes water segments that may be impacted by this project.

Table 5. Water Quality Classification Table (CWQCC 2013)

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
13a	All tributaries to the White River from Piceance Creek to Douglas Creek	Yes	Warm 2	Not Primary Contact Recreation	Yes	No
12	The White River from Piceance Creek to Douglas Creek	No	Warm 1	Existing Primary Contact Recreation	Yes	Yes

Segment 13a, Crooked Wash is protected for warm water aquatic life (Warm 2). The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures frequently exceed 20 °C. The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. Segment 13a is use protected which means that is not subject to the anti-degradation rule and water quality only needs to meet the numerical criteria in the classification standard.

Segment 12, White River from Piceance Creek to Douglas Creek, is protected for warm water aquatic life (Warm 1). The Warm 1 designation means that it has been determined that these waters are capable of sustaining a wide variety of warm water biota. Segment 13a and 12 are not listed on the 303d list of Colorado's impaired waters (CWQCC 2012). These segments are also protected for recreation and agricultural. Segment 12 is protected for water supply.

Groundwater: Precipitation in this area generally moves from areas of recharge to surface waters via alluvial aquifers and on the surface during spring melt and rain storms. A portion of annual precipitation infiltrates to deeper bedrock aquifers that contribute to contact springs. Springs and ground water inputs generally occur in both bedrock and alluvial aquifers along valley bottoms. Perched groundwater zones occur locally when saturated zones contact differences in permeability and solubility of individual formations. These contact zones can occur in the ridges

between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Surface Waters: Clearing, grading, and soil stockpiling activities associated with the Proposed Action would alter overland flow and natural infiltration patterns. Potential direct impacts include surface soil compaction caused by construction equipment and vehicles, removal of vegetation and disturbance of surface soils, which would increase rain-splash erosion and reduce the soil's ability to absorb water and increase the volume and rate of surface runoff, which in turn would increase surface erosion. The gulleys on the southeastern edge of the pad and along the access roads are the most likely areas for erosion to occur. Stormwater measures and best management practices include periodic monitoring of any erosion problems would be essential to avoid erosion and increased sedimentation to surface waters.

The soil analysis indicated the potential for severe rutting on roads, therefore good drainage features and surfacing the road would reduce impacts. To reduce erosion adjacent to roads and potential impacts to the water quality of downstream public lands access roads will be surfaced with six inches of road base and/or gravel from the Crooked Wash crossing to the pad site (Soils Section). Maintenance will include restoring the travel surface shape, road surfacing to maintaining an effective all-weather surface during drilling and production of the wells. This should reduce the risk of increased sedimentation to surface waters.

Surface runoff associated with storm events may increase sediment loads in surface waters down gradient of disturbed areas. Sediment can be deposited and stored in minor drainages and Crooked Wash where it would be moved into the White River during heavy convective storms. Surface erosion for this project is most likely during the construction and early production phases of the project and would be mitigated using BMPs for stormwater.

Groundwaters: The proposed casing and cementing program for each of the wells has been designed to protect and/or isolate all usable water zones. Potential freshwater zones will be protected by surface casing, cementing behind these casing. The grade of cement used will vary but drilling practices will be employed and checked by the BLM to eliminate gaps between cement. Cement protects the well casings from leaking due to deterioration over the life of the well and allows casings to withstand pressure increases during completion and hydrologic fracturing activities without bursting.

Loss of drilling fluids may occur at any time in the drilling process due to changes in porosity or other properties of the rock being drilled. When this occurs, drilling fluids may be introduced into the surrounding formations which could include freshwater aquifers. If drilling fluids are lost, groundwater aquifers may be contaminated by drilling additives. Using bentonite, freshwater and other additives that cannot contaminate groundwater mitigates the loss of drilling fluids that can be common during drilling since the introduction of these substances would not impact the quality of these groundwater features.

Impacts to groundwater resources could occur due to failure of well integrity, failed cement, surface spills, and/or the loss of drilling, completion and hydraulic fracturing fluids into groundwater. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator and location specific. Concentrations of these additives also vary considerably and are not always known since different mixtures can be used for different purposes in gas development and even in the same well bore. According to COGCC requirements, all chemicals (greater than 500 pounds) used during drilling, completion, and work-over operations, including hydraulic fracturing treatments, will be disclosed in a chemical disclosure form by well site.

Hydraulic fracturing is designed to change the producing formations' physical properties by increasing the flow of water and gas around the well bore. Hydraulic fracturing may also introduce chemical additives into the producing formations. Chemical additives used in completion activities will mostly be pumped back to surface tanks before production. Left over fluids will be injected in a Class II injection well.

Known groundwater bearing zones in the project area would be protected by the drilling plan as described. Groundwater resources (including the contact springs, perched aquifers, and groundwater zones described in the Affected Environment) are all in elevations above the surface casing. With proper drilling and completion practices contamination of groundwater resources is unlikely.

Cumulative Effects: Well pads in Crooked Wash 5th-Level Hydrologic Unit Code watershed are expected to be one to three well pads per section for portions, with the majority of the watershed not having any well pads. The nature of the drilling in this watershed is exploratory in nature. Exploratory wells include surface disturbance for well pads, pipelines, roads and support facilities. Typical exploratory wells are single well pads. Dispersed recreation (hunting) makes use of the access road to the pad and will add to the wear of the road. Use of the road during poor conditions could result in failure of drainage features and more road maintenance activities may be needed to keep this road in good shape. Livestock grazing occurs on public and private lands in the area and these activities may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and reclamation are expected in the Crooked Wash watershed. In general, soil disturbance in the Proposed Action and other activities are unlikely to impact water quality in Crooked Wash or the White River.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Neither ground nor surface water quality would be impacted by the No Action Alternative.

Cumulative Effects: Impacts would be similar to those described for the No Action Alternative, but would not include the impacts from the Proposed Action.

Mitigation: The following should be added as COAs:

1. To protect surface waters below the project area, the operator will keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.

2. Locate drainage dips and drainage ditches in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or dips.

3. When drilling to set the conductor and surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

Finding on the Public Land Health Standard #5 for Water Quality: It is unlikely that construction of these well pads, access roads, installation of pipelines or drilling would result in an exceedence of state water quality standards.

WETLANDS AND RIPARIAN ZONES

Affected Environment: The Crooked Wash channel supports a riparian community of rush, brook grass, salt grass and willow; with non-native species such as tamarisk, perennial pepperweed and bull thistle common throughout the reach. This system was considered to be at the lower end of properly functioning condition when assessed in 2005.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action is not expected to have any measurable influence on the Crooked Wash channel's riparian character. Currently, the system is functioning properly with adequate vegetative cover (riparian obligate species). Improvements in the existing road crossing (see Surface and Ground Water section) may potentially reduce any sediment loads that are currently entering the channel. With the application of BMPs associated with soil erosion, there is no reasonable likelihood that fugitive sediments would have any measureable influence on the function or condition of the Crooked Wash channel or its riparian resources.

Cumulative Effects: The Proposed Action is not anticipated to add substantially to existing or proposed disturbances and would have little influence on riparian communities. See discussion above in *Direct and Indirect Effects of the Proposed Action*.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to riparian resources under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact riparian or wetland resources under the No Action Alternative.

Mitigation: See mitigation *in Surface and Ground Water Quality* section.

Finding on the Public Land Health Standard #2 for Riparian Systems: The Crooked Wash channel is currently meeting the Land Health Standards for riparian communities. Neither the Proposed nor No Action Alternatives are expected to detract from the continued meeting of these standards.

VEGETATION

Affected Environment: The proposed project area crosses the four ecological sites outlined in Table 5. Table 5 outlines the ecological sites, plant community appearance and the potential plant community within the ecological site.

Table 5: Ecological sites and plant community appearance within the project area.

Ecological Site /Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Alkaline Slopes	Sagebrush/grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, wheat-grasses, Indian rice grass, squirreltail
Foothill Swale	Grass/Open Shrub Shrubland	Basin wildrye, western wheatgrass, slender wheatgrass, streambank wheatgrass, Indian rice grass, Nevada bluegrass, basin big sagebrush, fourwing saltbush, rubber rabbitbrush
Stony Foothills	Grass/Open Shrub Shrubland	Beardless bluebunch wheatgrass, western wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, Wyoming big sagebrush, black sage, serviceberry, pinyon pine and Utah juniper
PJ Woodland/Clayey Slopes	Pinyon/Juniper Woodland	Pinyon pine, Utah juniper, mountain mahogany, bitterbrush, serviceberry, Wyoming big sagebrush, beardless bluebunch wheatgrass, western wheatgrass, June grass, Indian rice grass, mutton grass

Upon inspection of the site, it was noted that there is also a small amount of cheatgrass and annual mustard in the project area. These species primarily occurred along the edge of BLM Road 1509 and were a minor component of the vegetation. Cheatgrass was also scattered throughout the understory throughout the rest of the project area, but its abundance was scattered and sparse.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed project would disturb 14.3 acres of which 1.4 acres would be long-term. The remaining acreage would be considered short-term and would be promptly re-vegetated once construction is complete. The principal impact to vegetation would be complete removal of vegetation for construction of the well pad, access road and pipeline, and the earthen disturbance associated with removing vegetation. In terms of plant community composition, structure, and function, the principal impact over the long term would occur if cheatgrass or noxious weeds are allowed to establish and proliferate on the disturbed areas

associated with well pad and access road construction. If revegetation is prompt and effective, there likely would be no long term impact to vegetation communities within the project area. The applicant has proposed to use BLM native seed mix #3. With the exception of the area where the proposed pipeline will cross a foothill swale ecological site along Crooked Wash, this seed mix is appropriate for the ecological sites in which the Proposed Action occurs.

Cumulative Effects: The Proposed Action would not add substantially to current or future disturbances within the project area. This project area currently has healthy and diverse plant community composition; therefore the removal of 14.3 acres of vegetation is not expected to have any measurable influence on the overall plant community with successful reclamation as outlined in the SUPO.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no action authorized that could influence the upland vegetation on these sites.

Cumulative Effects: There would be no additional contribution to previous, existing, or future disturbances under this alternative.

Mitigation:

1. In addition to the design features submitted by the applicant in the SUPO, the applicant shall use seed that is certified and free of noxious weeds. All seed tags will be submitted to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended via Sundry Notice (SN). The sundry will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

2. BLM recommends using seed mix #5 listed below where the proposed pipeline and road upgrades cross the Crooked Wash drainage.

Table 6. Native Seed Mix #5

Cultivar	Species	Scientific Name	Application Rate (lbs. PLS/acre)
Magnar	Basin Wildrye	Leymus cinereus	3.5
Rosanna	Western Wheatgrass	Pascopyrum smithii	3.5
San Luis	Slender Wheatgrass	Elymus trachycaulus ssp. trachycaulus	3
Critana	Thickspike Wheatgrass	Elymus lanceolatus ssp. lanceolatus	3
Timp	Northern Sweetvetch	Hedysarum boreale	4.5
Maple Grove	Lewis Flax	Linum lewisii	1
Alternates:			

Sodar	Streambank Wheatgrass	Elymus lanceolatus ssp. psammophilus	3
	Scarlet Globemallow	Sphaeralcea coccinea	0.5

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: Upland plant communities in the project area currently meet the Standard and are expected to meet the Standard in the future following project implementation and successful reclamation of disturbed areas, as described in the SUPO which have been incorporated in to the Proposed Action of this document.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The state of Colorado has noxious weed species classified into three categories: List A, List B, and List C. List A species are targeted for eradication in Colorado. List B species are those species which management plans have been developed to limit spread. List C species are those species which management plans have been developed to aid in management for the jurisdictions that choose to manage them.

There are no known List A species known to occur within the project area. The List B species hoary cress (whitetop), salt cedar (tamarisk), and spotted knapweed are known to occur within the general vicinity of the project area. Hoary cress and salt cedar are present along the Crooked Wash drainage, and spotted knapweed is present along BLM Road 1509 approximately 0.25 miles north of the proposed well pad. No other weeds are known to occur within the vicinity of the project.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would create 14.3 acres of new earthen disturbance; which if not revegetated with desirable species and/or treated with herbicides to eradicate invasive, non-native species, would likely be invaded and dominated by undesirable species, increasing the potential for fire and the consequent further proliferation of cheatgrass. Noxious weeds could also spread from the project sites to surrounding native rangelands resulting in a long term negative impact. The resulting increase of noxious weeds/cheatgrass could perpetuate a downward cycle of environmental degradation that would be largely irreversible. There would be a low likelihood of long term negative impact if the design features submitted by the applicant in the SUPO are followed.

Cumulative Effects: The Proposed Action would contribute to incremental fragmentation of native plant communities, which puts these areas at greater risk for establishment and spread of noxious and invasive weed species. If noxious weeds establish in these plant communities the health of the upland plant communities and the associated ecological function would decline. With timely and successful reclamation the risk of weed establishment and the effects of fragmentation would be minimized.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no action authorized that would influence the native vegetation of this area.

Cumulative Effects: There would be no additional contribution to previous, existing, or future disturbances under this alternative.

Mitigation: None beyond the design features submitted by the applicant in the SUPO.

SPECIAL STATUS ANIMAL SPECIES

Affected Environment: There are no threatened or endangered species that are known to inhabit or derive important use from the project area. The only listed species that has potential to be directly influenced by the Proposed Action is the Colorado pikeminnow. While the species occurs in the White River below Taylor Draw Dam and Kenney Reservoir (~ 26 valley miles from the project area), the White River and its 100-year floodplain from Rio Blanco Lake to the Utah state line are designated critical habitat for the pikeminnow. The White River in Colorado does not appear to support spawning activity, young-of-year nurseries, or juvenile concentrations areas for the Colorado pikeminnow. Additionally, while the listed bonytail, humpback chub, and razorback sucker do not occur in the White River, water depletions in the White River adversely affect these species' downstream habitats in the Green River.

Several BLM-sensitive animal species are known to inhabit or may be indirectly influenced by the Proposed Action, including Brewer's sparrow, northern goshawk, bald eagle, Townsend's big-eared bat, big free-tailed bat, fringed myotis, midget-faded rattlesnake, Great Basin spadefoot, northern leopard frog, flannelmouth sucker, mountain sucker, roundtail chub, and bluehead sucker.

The roundtail chub and bluehead sucker are confined to the White River. Additionally, flannelmouth and mountain sucker inhabit the White River but also occur in small numbers at the confluence (and up to one mile upstream) of the White River and Crooked Wash. Northern leopard frogs are patchily distributed along the Crooked Wash channel and are likely associated with the White River's aquatic and riparian community.

South and southeast facing rock slabs or rock outcrops within the project area have the potential to support midget faded rattlesnakes (MFR). These BLM-sensitive species display high fidelity to specialized den habitats and are not considered resilient to adverse habitat modifications or den disturbance. These snakes emerge from their dens in late April or early May and remain in close proximity to the den until late May/early June. Gravid females and juveniles remain within 200 meters of dens throughout the year, while mature males and nongravid females disperse an average 1,000 meters from dens June through September. Concentrated year-round association with the den sites makes these snakes particularly vulnerable to vehicle-caused mortality.

Northwest Colorado lies on the eastern margin of Great Basin spadefoot toad distribution. Spadefoots are known recently from western Rio Blanco County (west of Douglas Creek) and neighboring Uintah County, Utah and appear to be associated with ephemeral stock ponds in valley and basin terrain. There are scattered historical records of spadefoot from Powell Park (White River valley near Meeker, 1997) and a single record from Piceance Creek near Black Sulphur Creek (1973). Although seemingly rare and sporadically distributed in the WRFO, it remains possible that toads occupy shrublands and woodlands in close association with

stockponds distributed throughout the project area that retain water over the minimum five week reproductive and larval development period.

Although the distribution of bats in the WRFO is not completely understood, recent acoustic surveys in the Piceance Basin and along the lower White River have documented the localized presence of Townsend's big-eared and big free-tailed bats along larger perennial waterways. These bats typically use caves, mines, bridges, and unoccupied buildings for night, nursery, and hibernation roosts, but in western Colorado, single or small groups of bats use rock crevices and tree cavities. Rock outcrops and mature components of pinyon-juniper which may provide temporary daytime roosts for small numbers of bats are limited in the immediate vicinity of the project area. Relatively extensive riparian communities are available along Crooked Wash. There are no underground mines or known caves or unoccupied buildings in the vicinity of the project area. Birthing and rearing of young for these bats occur in May and June, and young are capable of flight by the end of July. The big free-tailed bat is not known to breed in Colorado.

The WRFO has about six recent records of goshawk nesting in the Piceance Basin, the nearest being over 20 miles from the project area. Based on BLM's experience, goshawks nest at low densities throughout the Basin in mature pinyon-juniper woodlands above 6,500 ft and Douglas-fir and aspen stands. Goshawks establish breeding territories as early as March and begin nesting by the end of April. Nestlings are normally fledged and independent of the nest stand by mid-August.

Brewer's sparrows are common and widely distributed in virtually all big sagebrush, greasewood, saltbush, and mixed brush communities throughout the planning area. These birds are typically one of the most common members of these avian communities and breeding densities generally range between 10-40 pairs per 100 acres. Although most abundant in extensive stands of sagebrush, the birds appear regularly in small (one to two acre) sagebrush parks scattered among area woodlands. Typical of most migratory passerines in this area, nesting activities normally take place between mid-May and mid-July.

The White River corridor (located roughly three miles from the project area) is the hub for seasonal bald eagle use of the White River valley. Particularly during the late fall and winter months, several dozen bald eagles make regular foraging use of open upland communities along the river and its larger tributaries. These foraging forays from nocturnal roosts along the White River are dispersed and opportunistic.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, the BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included

reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-feet depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with the Proposed Action would be covered by this agreement and water-use values associated with this project would be entered into the WRFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year. Implementation of State and federally-imposed design measures to control erosion and spills would limit the risk of contaminants migrating off-site and degrading water quality in the White River.

Northern goshawk: The nearest known goshawk nest is over 20 miles from the project area. Raptor surveys were conducted in August 2012. No nests thought to be used by this species were found in the project area (survey results provided in *Terrestrial Wildlife* section). Impacts to northern goshawk would be identical to those discussed for woodland raptors in the *Terrestrial Wildlife* section.

Brewer's sparrow: The Proposed Action would involve approximately 14 acres of big sagebrush habitat (five for pad development and nine with road/pipeline). Direct and indirect impacts to Brewer's sparrow associated with pad development would be identical to those discussed in the *Migratory Bird* section below. Sagebrush communities associated with pipeline and road upgrades may provide forage and cover resources for Brewer's sparrow; however use of these communities is likely suppressed to a certain degree due to the proximity to the existing road (see discussion in *Migratory Bird* section).

Bald eagle: Bald eagle foraging use is dispersed and opportunistic across the entire White River Resource Area. The nearest known nest/roost location is nearly four miles from the project area. Disturbance/activity associated with the Proposed Action is not anticipated to have any conceivable influence on local bald eagle populations.

Northern leopard frog/Great Basin spadefoot: There are no known stock ponds in the vicinity of the project area that may provide suitable habitat for Great Basin spadefoot. Northern leopard frogs have been documented along the Crooked Wash channel near the existing road and proposed pipeline crossing. Pipeline installation and road upgrades/improvement at the Crooked Wash channel crossing may potentially supply sediment to the Crooked Wash channel; however, with the application of BMPs associated with soil erosion in addition to an engineered road design, there is no reasonable likelihood that fugitive sediments would have any measureable influence on the function or condition of on the Crooked Wash channel or its aquatic resources (see discussion in *Riparian and Wetland* section). Improvements to the road at the existing channel crossing may actually reduce the amount of sediment that is currently being supplied to the Crooked Wash channel.

Midget faded rattlesnake: Although there is limited habitat in the vicinity of the proposed well pad, rock outcrops along BLM Road 1509 could potentially provide denning habitat and hibernacula for this species. Road upgrades (widening, turnouts) have the potential to encroach on or remove habitat altogether. Increased vehicle traffic associated with well development may result in mortality if hibernacula/denning habitat are in close proximity to roadways.

Cumulative Effects: Cumulative effects would be similar to those discussed in the *Migratory Bird and Terrestrial Wildlife* sections.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to special status animal species under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact special status animal species or important habitats under the No Action Alternative.

Mitigation: See *Migratory Bird* section for mitigation regarding Brewer's sparrow.

1. Surveys for midget faded rattlesnakes will be conducted if potential/suitable denning habitat is located within 200 meters of road upgrades (e.g., widening, turnouts etc., particularly between mile marker 3.6 and mile marker 3.8). Surveys should be conducted no earlier than April 15 and results provided to the BLM prior to construction initiation. Should an active den be located, no construction activities (road upgrades) or vegetation clearing will be permitted from April 15 – August 1 within 200 meters of the den. Minor modifications in road design may be necessary to avoid involvement with denning habitat. Site specific exceptions and modifications (e.g., daily timing restrictions) may be considered.

Finding on the Public Land Health Standard #4 for Special Status Species: The Land Health Standards for special status animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from continued meeting of these standards.

MIGRATORY BIRDS

Affected Environment: The pad itself is situated in a sagebrush park that is largely surrounded by dense, mixed-aged pinyon-juniper woodlands. Herbaceous ground cover is well intact with a diverse mix of perennial grasses and forbs. The proposed pipeline parallels an existing gravel road and is largely encompassed by big sagebrush communities with small inclusions of pinyon-juniper woodlands. These woodland and sagebrush communities provide nesting habitat for a variety of migratory bird species during the breeding season (typically mid-May through mid-July).

The BLM lends increased management attention to migratory birds listed by the U.S. Fish and Wildlife Service (FWS) as Birds of Conservation Concern (BCC). These are bird populations

that monitoring suggests are undergoing range-wide declining trends and are considered at risk for becoming candidates for listing under the Endangered Species Act if not given due consideration in land use decisions. Three PJ associated species which likely occur in the project area and are considered BCC include juniper titmouse, Cassin's finch, and pinyon jay. The titmouse and finch occur widely in virtually all available woodlands, but occur at relatively low densities. Pinyon jays are loosely colonial nesters and are patchily distributed throughout the WRFO's woodlands. This species is reportedly an aggressive and persistent re-nester. BCC associated with sagebrush shrubland habitats is limited to the BLM-sensitive Brewer's sparrow, which is addressed in the Special Status Animal Species section.

The development of reserve pits that contain drilling fluids have attracted waterfowl use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Pad development would result in the long-term removal of approximately five acres of big sagebrush communities. Following natural succession regimes, these communities would take anywhere from 20-30 years to return to preconstruction conditions after reclamation. Pipeline installation and road upgrades would directly remove roughly nine acres of predominately big sagebrush and grassland communities with minimal woodland involvement. With prompt and effective reclamation along the pipeline corridor, vegetation loss would be short-term (one to three years) and may provide effective cover and forage resources for some migratory bird species.

Drilling activities that take place during the migratory bird breeding season have the potential to directly influence nesting activities/outcomes including bird displacement, nest abandonment and possible nestling mortality. Indirectly, functional forage and nesting habitats within 100 meters may be impacted due to reductions in nest densities and avoidance of habitats associated with increased human activity, vehicle traffic and construction activities. If drilling activities were to take place outside of the breeding season, there would be no potential to directly influence nesting outcomes.

It has been brought to BLM's attention that in certain situations migratory waterfowl have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Cumulative Effects: The Proposed Action is not anticipated to add substantially to existing or proposed disturbances. Currently, there is very little oil and gas-related disturbance in or around the project area (the nearest location is approximately one mile away). The long-term removal of roughly five acres of sagebrush habitat is not anticipated to have a measureable influence on local bird populations as there is considerable suitable habitat adjacent to the project area. Similarly, the loss of approximately nine acres of sagebrush/grassland communities

(associated with pipeline installation) is not expected to impact local bird populations as habitats adjacent to existing roads typically provide limited nesting and forage resources. Prompt and effective reclamation would promote a healthier, diverse plant community which may potentially benefit local wildlife populations as a whole.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to migratory bird species or important habitats under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances under the No Action Alternative.

Mitigation:

1. Vegetation removal associated with well pad, road and pipeline development will take place outside the migratory bird nesting season of May 15 through July 15. Earthwork associated with the Proposed Action will be permitted from July 16 through May 14.

2. The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

TERRESTRIAL WILDLIFE

Affected Environment: The lower elevation big sagebrush and pinyon-juniper communities that encompass the proposed location are categorized by Colorado Parks and Wildlife (CPW) as big game general winter range. These ranges typically receive heaviest use from October through April. Approximately 1.3 miles of the access road (along BLM Road 1509) passes through mule deer severe winter range – a specialized component of winter range that supports virtually the entire herd during the most extreme winters (temperature, snowfall etc.).

Mature components of pinyon-juniper woodlands which surround the proposed pad location may provide suitable nest substrate for woodland raptors (accipitrine and buteo species, long-eared and saw-whet owls). Rock outcrops and cliff faces in the vicinity of the project area may also provide suitable nest sites for red-tailed hawk and golden eagle. Courtship for most of these species begins in early to mid-March, with most nesting attempts beginning in mid-May. Most young have fledged by mid-August.

The distribution and abundance of small mammal populations are poorly documented within the resource area. Recent trapping efforts undertaken throughout Piceance Basin indicate a high tendency in both sagebrush and pinyon-juniper communities for more generalized species such

as deer mouse and least chipmunk and it is suspected that these species would be relatively abundant in the project area. There are no small mammal species that are narrowly endemic or highly specialized species known to inhabit the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would remove roughly 14 acres of predominately big sagebrush/grassland communities that provide forage and cover resources for local wildlife populations. Should pad construction and drilling activities take place during the late fall and winter months, there would be greater potential to displace big game as both deer and elk tend to congregate in the surrounding lower elevation sagebrush and pinyon-juniper habitats during these time frames. Increased vehicle traffic, noise and human activity, particularly during the construction and drilling phase would have the greatest potential to displace local wildlife (contributing to increased energetic demands); however due to the limited amount of activity in the surrounding area, it is suspected that local big game populations would have adequate forage and cover resources available. Local wildlife would be expected to return to the area once drilling has ceased. Of greater consequence is the fact that the Proposed Action represents a new intrusion in an otherwise undeveloped area, particularly in important big game winter ranges. While development of this one well pad will not likely have substantial influence on local big game populations, future increased and expansive development throughout the area has the potential to negatively impact big game (see also discussion in *Cumulative Impacts of the Proposed Action*).

Pinyon-juniper woodlands within 0.25 miles and rock outcrops within 0.5 miles of the project area were surveyed for raptor use in August 2012. No nests were observed within the surveyed area; however one unoccupied nest was located just outside the 0.25 mile buffer. Although there was no evidence of use during the past nesting season, the structure was in relatively stable condition. Direct involvement with woodland habitat is nominal however, indirect effects such as noise and activity associated with pad development and drilling may disrupt nesting activities or influence nest site selection as birds would likely tend to avoid functional habitats in close proximity to disturbances. Because raptor surveys are only valid for one year, the project area will need to be resurveyed and the results submitted to the BLM staff biologist prior to construction initiation.

Cumulative Effects: The Proposed Action in and of itself is not anticipated to contribute substantially to existing or proposed disturbances, nor is expected to have any measureable influence on local wildlife populations. While this would represent an incremental loss in big game winter range, there is extremely limited development in the vicinity of the project area. Although unknown at this time, potential for future development is probable. Important big game wintering ranges south of Rangely and throughout the Piceance Basin have, in the past, or are currently experiencing heavy oil and gas-related development. These winter ranges north of the White River remain one of the few areas with limited oil and gas-related development. Increased and expansive development in this area would be expected to contribute to reductions in important big game wintering habitat with potential negative consequences for local big game populations.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to terrestrial wildlife species under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact terrestrial wildlife species or habitats under the No Action Alternative.

Mitigation:

1. A raptor survey will be completed and results submitted to BLM staff biologists prior to construction initiation. Should an active nest be found, the appropriated timing stipulations will be applied (TL-04, TL-01 per the 1997 White River ROD/RMP).

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The Land Health Standards for animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from the continued meeting of the Land Health Standards.

CULTURAL RESOURCES

Affected Environment: The proposed well pad location and access route have been inventoried at the Class III (100 percent pedestrian) level (Crum 2012 compliance dated 11/19/2012, Davenport 2011 compliance dated 11/17/2011) which did not identify any sites that could be directly impacted by development. However there are two sites that are less than 1,000 feet (305 meters) from the access road. There is also a potential, though likely limited, for subsurface remains in any areas of soil development along the access route or on the well pad location.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed project would not directly impact any known cultural resources. There could be indirect impacts to some resources if access is improved into the general area as a result of upgrades to the access road. Increased activity in the area could, potentially result in an increase in unlawful collection of surface artifacts by visitors to the area.

Cumulative Effects: There is a potential for some, unquantifiable indirect impacts to cultural resources in the vicinity of the improved access road as a result of project implementation. An unlawful collection of surface artifacts would constitute a permanent, long term, irreversible, irretrievable loss of contextual data and artifacts from the regional archaeological database.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new direct or indirect impacts to cultural resources under the No Action Alternative. Access would not be improved making it easier for visitors to access the area and potentially collect artifacts. Slow, natural erosion would continue to impacts sites as it has since the sites were last occupied by prehistoric peoples.

Cumulative Effects: The loss of features or artifacts due to natural erosion will continue as it has for many years resulting in some loss of archaeological data but the loss is not considered to be unacceptable.

Mitigation: Operator has committed to standard mitigation as seen under *Design Features* above.

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed well pad and access are located in an area mapped as the Wasatch and Fort Union formations (Tweto 1979). The BLM has categorized the Wasatch Formation as a Potential Fossil Yield Classification (PFYC) 5 formation indicating it is known to produce scientifically noteworthy fossils (c. Armstrong and Wolny 1989, Doi 1990). The Fort Union Formation has been categorized as a PFYC 3 formation indicating that its potential to produce scientifically noteworthy fossil resources in this area is not well established or understood. Portions of the access route have been inventoried for fossil resources based on surface exposures of rock (Conner 2011 compliance dated 12/31/2011). No surface manifestations of fossils were identified at the time of inventory.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: If it becomes necessary to excavate into the underlying sedimentary rock of the Wasatch Formation, where the well pad and road re-route are located, to level the well pad, excavate any reserve/cuttings/blooie pits, excavate trenches to bury any well tie pipelines or remove rock to re-route the road, there is a very high potential to impact scientifically noteworthy fossil resources. In areas outside of the well pad where it becomes necessary to upgrade the road to allow for larger drilling equipment into the pad location there is also a potential to impact scientifically noteworthy fossils in those portions of the road within the Wasatch formation.

At the southern portions of the access road and well tie pipeline route, in the Fort Union Formation, if it becomes necessary to excavate into the underlying sedimentary rock formations there is a potential to impact scientifically noteworthy fossils, but the severity of the impacts and the fossils that would potentially be impacted are not known fully. The fossils impacted may or may not be of scientific importance, such as vertebrates or rare invertebrate or plant species.

Cumulative Effects: Direct impacts to fossil resources as a result of construction related excavation into the underlying sedimentary rock could result in the destruction of scientifically noteworthy fossil resources not previously discovered and recovered during project inventory. Erosion in some areas could be increased as a result of construction activity which could increase potential impacts to the general project area.

Indirect impacts to fossil resources could include, but are not necessarily limited to, increases in unlawful collection due to the improved access to the area and resultant potential increases in human activity in the area, including drill pad construction, well drilling, general well operations

over the life of the well, and generally easier public access into the areas, leading to further unlawful collecting.

Any loss of fossil resources as a result of direct or indirect impacts from construction of the well pad, access road and well-tie pipelines could be considered a permanent, long term, irreversible and irretrievable loss of data from the regional paleontological database.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Under the No Action Alternative there would be no new construction or development related impacts to fossil resources in the Wasatch and Fort Union formations. There would not be a potential for increased erosion or accelerated unlawful collection of fossil materials under the No Action Alternative. The natural, slow weathering of the formation resulting in occasional exposure of new fossil would continue at the current rate slow natural erosion.

Cumulative Effects: The natural, slow weathering of the formation resulting in occasional exposure of new fossil would continue at the current rate slow natural erosion. These losses are not necessarily considered to be overly detrimental to the regional scientific database.

Mitigation: Operator has committed to standard mitigation as seen under *Design Features* above.

VISUAL RESOURCES

Affected Environment: Visual resources are the visible physical features of a landscape that convey scenic value. The BLM developed the Visual Resource Management system to identify and evaluate an area's scenic value. The visual resource inventory (VRI) process described in BLM Manual H-8410-1 establishes VRI classes, which are used to assess visual values for areas of the landscape. VRI classes II, III, and IV are determined by using a combination of three components: scenic quality, sensitivity level, and distance zones, with Class II having a higher level of value and Class IV having the least visual value. VRI Class I areas are assigned to special management areas, such as Wilderness Study Areas, which are the most valued landscapes. The VRI classes are the baseline from which environmental effects are measured. The Proposed Action is located in Visual Resource Inventory Class IV, which means this area is a lesser valued scenic landscape. The area of the landscape where the Proposed Action is located was placed into VRI Class IV as a result of a composite of the three above mentioned components. The area received a Scenic Quality scoring of B (A, B, and C type rating). Other determining factors for the VRI Class IV rating for this area were a result of the Sensitivity Level rating as low value to the public, and the project being located in a Distance Zone of Foreground-Middleground.

The BLM also maintains four Visual Resource Management (VRM) classes used to describe the level of acceptable change allowable at a given location. Scenic values in the BLM White River Resource Area have been classified according to the Visual Resource Management (VRM) system into four Visual Resource Management Classes (I-IV), and corresponding VRM objectives were established in the 1997 White River ROD/RMP. VRM Class I are the most

restrictive with VRM Class IV being the least restrictive for the amount of allowable change to occur on the landscape. The VRM objectives provide the amount of allowable change and are considered a resource-allocation. The Proposed Action is located within a VRM Class III area. The objective of the VRM III classification is to partially retain the existing character of the landscape. The level of change to the characteristic landscape in VRM III areas should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The Proposed Action is located in the Crooked Wash drainage area. This panoramic landscape consists of vast gently sloping topography mixed with small areas of steeply eroded hillsides largely adjacent to drainages. Scattered stands of pinyon-juniper contrasting with the sagebrush and grasses provide texture to the landscape. The Proposed Action would primarily be viewed from BLM Road 1509 by oil and gas employees, local ranch operators, big game hunters, and other recreationalists. The nearest paved road is State Highway 64, which is located several miles away, and the Proposed Action would not be visible to a casual observer traveling along this route.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The construction of the well pad, the pipeline, and the re-routed public road includes a total of 14.3 acres of ground disturbance. The exposed soils created by this construction activity and associated linear road and pipeline disturbance will create short term moderate impacts to the landscape characteristics from the construction start until interim reclamation. Upon completing interim reclamation, exposed soils will be reduced to 1.4 acres and other formerly disturbed acres will then have vegetation growing. In areas that had pinyon and juniper woodlands removed, the visual impact of contrasting vegetation of grass and shrubs with adjacent woodlands may be noticeable for several decades. This may be especially noticeable along small portions of the pipeline. The 1,000 feet of surface pipeline will be noticeable along BLM Road 1509 until final reclamation is complete. This may cause a linear visual impact to those traveling this route. The unnatural shape and color contrast of all above ground structures could cause moderate long term impacts to casual observer, if not mitigated. To reduce this impact, the recommended mitigation is to paint all permanent above ground structures (on-site for six months or longer) including tanks, associated production equipment, and any piping and valves, Juniper Green according to the BLM Standard Environmental Chart CC-001: June 2008. To those traveling BLM Road 1509 the Proposed Action will be very noticeable because the well pad is proposed to be located in the middle of the road and road is proposed to be re-routed immediately around the well pad. Overall, the implementation of the Proposed Action will not change the Visual Resource Inventory Class IV rating and will meet the Visual Resource Management Class III objective of partially retaining the existing character of the landscape in this area.

Cumulative Effects: There is currently not a lot of energy development within the vicinity of the proposed well pad so upgrading the road and construction of the well pad and pipeline would create contrasts in shape and color with the surrounding area until reclamation is completed that would be noticeable to members of the public using BLM Road 1509.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: By not constructing the well pad, pipeline, or re-routing BLM Road 1509, there would be no new impacts to visually concerned publics or visual resource management objectives.

Cumulative Effects: None identified as a result of this alternative.

Mitigation:

1. Paint all permanent above ground structures (on-site for six months or longer) including tanks, associated production equipment, and any piping and valves Juniper Green according to the BLM Standard Environmental Chart CC-001: June 2008.

HAZARDOUS OR SOLID WASTES

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored, or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action: The proposed activities may use regulated materials and will generate some solid and sanitary wastes. The potential for harm to human health or the environment is presented by the risks associated with spills of fuel, oil and/or hazardous substances used during oil and gas operations. Other accidents and mechanical breakdowns of machinery are also possible.

Direct and Indirect Effects: The proposed activities may pose direct and indirect impacts to soil, water, air, and biological resources that occur in close proximity to individual disturbance features. Impacts to these resources may also occur at farther distances from individual disturbance features, though it is assumed that these impacts would be reduced because of proximity to the point source. Accidents and mechanical breakdown may also have direct and indirect effects to resources depending on the type of accidents or mechanical breakdown and when and where the occur temporally and spatially

Cumulative Effects: Effects to soil, water, air, and biological resources as a result of cumulative release of hazardous materials into the environment are unknown. Because some hazardous substances persist in the environment, it is reasonable to assume that multiple activities that may occur throughout the project area that result in the release of individual hazardous material spills or discharge events, may cumulatively result in impacts to soil, water, air, and biological resources. Substances used in the hydraulic fracturing process may be harmful to human health or the environment. However, freshwater-bearing formations and other resources suitable for human use or consumption are isolated from man-made materials used in oil and gas operations through the use and cementing of surface casing, see 43 CFR 3162.5-2(d).

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No hazardous or other solid wastes would be generated under the No Action Alternative.

Cumulative Effects: Cumulative effects are the same as those analyzed in the Proposed Action in terms of the type of disturbance. In terms of duration and extent, however, this alternative would most likely result in reduced cumulative impacts because of the existing development in the project area, rather than the new proposed well pad.

Mitigation:

1. Comply with all Federal, State and/or local laws, rules, regulations, statutes, standards and implementation plans. This includes but is not limited to, Onshore Orders, Surface Use Plans, State and Rio Blanco County permits.

2. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.

3. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

4. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

5. Lessee/Operators and ROW holders will report all emissions, releases, spills, leakages, blowouts, fires that may pose a risk of harm to human health or the environment, regardless of a substances's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.

6. As a reasonable and prudent lessees/operator and/or ROW holder in the oil and gas industry, acting in good faith, all lessees/operators and ROW holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or ROW holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

FIRE MANAGEMENT

Affected Environment: The Proposed Action lies within the B4 Crooked Wash/Indian Valley fire management unit. This polygon consists of Wyoming big sagebrush and pinyon juniper woodlands. A modified suppression strategy may be utilized where the potential to burn less than 200 acres of sagebrush exists. This strategy may promote a vegetation mosaic representing a spectrum of successional stages in continuous sagebrush stands. Local preparedness levels and proximity to infrastructure may limit fire management strategies to direct control by full suppression. The fire regime/condition class for this fire management polygon is currently at a two, or is land considered to have been moderately altered from its historical fire return interval.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: During a wildfire event, the primary objective is firefighter and public safety. While in the construction phase of the proposed project, the appropriate management response may be full suppression. Stock piled vegetation which is stored on site for future purposes creates jack pots of fuel which are susceptible to fire brands. A direct effect of the proposed project will be the temporary suspension of the use of naturally ignited fire to meet multiple resource management objectives. Once the project is complete, the man-made vegetation breaks would alter the behavior of wildfires in the area, and help to create areas that may be suitable for use as fire breaks to help control wildfires.

Cumulative Effects: A continued increase in natural gas drilling within the area may cause difficulties in full implementation of the Northwest Colorado Fire Program Area Fire Management Plan. Only when drilling operations decrease will fire and resource managers allow naturally ignited fire to create a vegetation mosaic representing various plant communities in different successional stages.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No vegetation alteration or construction would occur under this alternative. Due to the known frequency of natural fire ignitions in the area of the proposed project, fire may again impact the site in 35 to 100 years. This natural return interval could return the site to a fire regime/condition class one.

Cumulative Effects: Without new oil and gas development and infrastructure, there would be less human related vegetation breaks which when combined with natural mosaic vegetation patterns have been used to contain fires in the past. This could lead to increased future fire suppression costs.

Mitigation:

1. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
   a) The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
   b) The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
   c) The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting,

grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.

d) Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.

e) Piled vegetation retained for reclamation as part of forest management mitigations shall be located at least twenty five feet from other receptive fuels.

FOREST MANAGEMENT

Affected Environment: The Proposed Action is located within a productive exposure stand classes of pinyon/juniper woodlands as defined by a survey performed in 2003-2005 by White River Field Office personnel. Productive exposure types occur on primarily lower gradient slopes and on north and east aspects. Growth rates are higher in these areas due to soil features which allow for effective use of precipitation. This habitat type is further broken down based on the age class of the stand. In this case, the affected stand is mature. Mature pinyon/juniper trees on productive exposure establish themselves as the dominant plant community on the site. Mature stands are valuable locally as a source of fire wood.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Table 7 shows the estimated loss of woodland acres as a result of the Proposed Action. Following reclamation of it is expected that pinyon and juniper will invade the site within 50-70 years and would develop a mature stand within 200-300 years. Under the Proposed Action about 0.26 acres of woodlands would be removed. Impacts would be long-term until woodlands regenerate successfully.

Table 7: Woodland Acreage

Project Name	Acreage In Woodlands		
	Acres Disturbed (Total)	Stand Class	Total Cords
Mesa CBU 24-9-398 well	0.26	Pinyon Juniper Dry Exposure/Productive Mature/Young	2

Cumulative Effects: Removal of mature and middle-aged pinyon/juniper trees would reduce the potential for outbreak of woodland diseases and pest infestations. By reducing the stand size of juniper trees in areas historically included in sagebrush and grass communities, it would increase the open areas preferred as foraging areas by wildlife and livestock. Implementation of mitigation measures would reduce the build-up of cleared woody material from the project area, reducing the likelihood of slash contributing to possible large fire.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Under this alternative there would be no construction of wellpads and no removal of pinyon and juniper woodlands.

Cumulative Effects: The proposed area would develop into mature stands over a period of 150 to 250 years. The area would increase in cover and density causing sagebrush to be smothered out over a period of time. With the increase to cover and density the area could potentially burn in a stand replacing wildfire with the likely loss of the current surrounding mature pinyon/juniper stands.

Mitigation:

1. In accordance with the 1997 White River RMP/ROD, all trees removed in the process of construction shall be purchased from the BLM. Trees should first be used in reclamation efforts and then any excess material made available for firewood or other uses.
    a) Woody materials required for reclamation shall be removed in whole with limbs intact and shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20percent ground cover. Limbed material shall be scattered across reclaimed areas in a manner that avoids the development of a mulch layer that suppresses growth or reproduction of desirable vegetation. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.
    b) Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

RANGELAND MANAGEMENT

Affected Environment: The proposed well pad and access route are located within the McAndrews Gulch grazing allotment (06600). Authorized livestock use within this allotment is shown in Table 8.

Table 8: Authorized use Within the McAndrews Gulch Allotment (06600)

Livestock		Grazing Period		%Public Land	Authorized Use (AUMs)
Number	Kind	Begin	End		
150	Cattle	4/15	5/14	74	109
250	Cattle	5/15	10/31	74	1,034
260	Cattle	11/1	1/15	74	481

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would result in a short-term loss of less than two Animal Unit Months (AUMs) of livestock forage. This initial loss of forage would be considered short term if revegetation is prompt and effective. There would be no net loss of livestock forage over the long term with only 1.4 acres being disturbed during production assuming interim reclamation is adequate. Following successful revegetation of disturbance associated with well pad, road, and pipeline construction, it is expected that forage available to livestock will increase slightly due to conversion of the disturbed area from a woodland dominated site to a grass/forb site which would potentially have higher forage production value for grazing animals. Three cattleguards are crossed along BLM Road 1509, the proposed access route. The SUP indicates that any existing cattleguards will be repaired or replaced as necessary as a result of damage resulting from rig moves.

Cumulative Effects: The McAndrews Gulch grazing allotment is the analysis area for cumulative effects for this action. Past and present oil and gas development has occurred within this allotment. This one action is not anticipated to have a cumulative loss in forage within the allotment, however the combination of past, present, and potential future development could result in a cumulative net loss in forage for the long-term. These losses in forage will be analyzed in the permit renewal process for the allotment.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action Alternative will result in no surface disturbing activities in the project area and in turn will not impact livestock grazing activities.

Cumulative Effects: There would be no vegetation disturbing activities which would contribute to short term reduction of forage within the project area. There would be no potential for damage to range improvement projects as a result of the proposed project.

Mitigation:

1. Any range improvement projects such as fences, water developments, or other livestock handling/distribution facilities that are damaged or destroyed as a direct or indirect result of implementation of the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.

FLOODPLAINS, HYDROLOGY, AND WATER RIGHTS

Affected Environment: Drainage patterns around the pad site, stormwater and the improved access roads have been considered in the designs submitted with the SUPO. BLM actions or authorizations affecting surface water will be conducted in compliance with state and federal laws including Section 404 permit requirements from US Army Corp of Engineers (USACE). Executive Order 11988 requires the BLM to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The access road crossing on Crooked Wash is the only disturbance that would impact floodplains. The operator is required to research the need for notification for the nationwide permit for Linear Transportation Projects (14). To qualify for the permit the discharge cannot

cause the loss of greater than 1/2-acre of waters of the United States. Notification is required in some cases.

Estimates for freshwater use include 5,000 bbls of freshwater for drilling, and up to75,000 bbls of either fresh and/or recycled water for completions. The amount of water used for dust abatement is estimated to be 1,000 bbls/year. Freshwater use would be 6,000 bbls to 81,000 bbls (0.77 acre-ft to 10.44 acre-ft) the first year and would come from sources within the Piceance Basin.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Mesa Energy has included estimates for freshwater use and the potential sources and water rights planned to supply this freshwater. Since freshwater use would be within existing valid water rights no impacts are expected to other water rights in the White River.

When field design requirements necessitate infrastructure in floodplains it should be designed in such a way to minimize alterations of natural channel and floodplain conditions. When neither of these goals is possible or fully effective the infrastructure in the floodplain should be designed to minimize impacts, allow for mitigation of impacts, and restore the natural conditions after occupancy.

Direct impacts to floodplains from the Crooked Wash crossing would be to change the movement and deposition of sediment during storm event. Assuming adequate engineering is employed impacts should be reduced. This crossing will be an armored low water crossing designed to handle the weight of heavier trucks need during drilling. Flow during peak events will not likely be impeded and the floodplain should not be impacted by this crossing.

Cumulative Effects: Well pads in Crooked Wash 5th-Level Hydrologic Unit Code are expected to be one to three well pads per section for portions of this watershed with the majority of the watershed not having any well pads. The nature of the drilling in this watershed is exploratory in nature. Exploratory wells include surface disturbance for well pads, pipelines, roads and support facilities. Typical exploratory wells are single well pads. Dispersed recreation (hunting) makes use of the access road to the pad and will add to the wear of the road. Use of the road during poor conditions could result in failure of drainage features and more road maintenance activities may be needed to keep this road in good shape. Livestock grazing occurs on public and private lands in the area and these activities may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and reclamation are expected in the Crooked Wash watershed.

Direct and Indirect Effects: Floodplains, water rights, hydrology would not be impacted by the No Action Alternative.

Cumulative Effects: Impacts would be similar to those described for the No Action Alternative, but would not include the impacts from the Proposed Action.

Mitigation: None.

REALTY AUTHORIZATIONS

Affected Environment: The Proposed Action is within the Oil & Gas Exploratory Unit (COC75144X) boundary; therefore, rights-of-way for the access road and pipeline are not required. Access road right-of-way (ROW) COC75193 is authorized to Mesa Energy Partners for access to the Coyote Basin Unit. Table 9 describes the existing rights-of-way in the area of the proposed well pad, access road, and pipeline.

Table 9. Existing ROWs Near the Proposed Action

Case File	Holder	Authorized Use
COC26085B	ETC Canyon Pipeline LLC	Natural gas pipeline
COC69536	Sonterra Energy LLC	Natural gas pipeline

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Damage to the facilities or rights of existing ROW holders could occur if construction activities are not properly planned and other ROW facilities are not properly identified prior to construction.

Cumulative Effects: As the number of ROW holders in the project area increases so would competition for suitable locations for facilities.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Failure to authorize the proposed project would not result in any increased impacts to realty authorizations in the area.

Cumulative Effects: There would not be any cumulative effects from not authorizing the proposed project.

Mitigation: Operator has committed mitigation as seen under *Design Features*.

1. The holder will coordinate with existing ROW holders prior to any construction activity. The existing ROW holders are ETC Canyon Pipeline and Sonterra Energy.

RECREATION

Affected Environment: The Proposed Action occurs within the White River Extensive Recreation Management Area (ERMA). The BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use. The project site is located in the Recreation Opportunity Spectrum (ROS) classification area of Semi-Primitive Motorized. Areas within this classification are characterized by a largely natural appearance and are accessible by foot, horseback, bike or motor vehicle generally on native-surfaced roads or gravel. Interaction with other visitors is relatively low. There are minimum on-site controls and restrictions, and the area provides for a moderate probability of experiencing isolation, remoteness, and closeness to nature. The primary recreation activity in this area is upland big game hunting from late August

through December of each year with peak use from mid-October through mid-November. The Proposed Action is located within the Colorado Parks and Wildlife (CPW) Game Management Unit (GMU) 11, which is a popular big game hunting area where the hunter has good opportunities to pursue both mule deer and elk. BLM Road 1509 is used by big game hunters to access public lands from late August through December with peak use from mid-October through mid-November of each year. The route provides the only full sized vehicle access between State Highways 64 and 40 and accesses a variety of other public routes and a large portion of public lands in this area. The majority of use on this route occurs from big game hunters from mid-October through mid-November of each year. Big game hunters in this area come from all across the country to this area each year. There are 13 Special Recreation Permits (SRPs) authorized throughout this area for commercially outfitting and guiding for mountain lion hunting which are permitted for all BLM lands within the WRFO.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Due to the Proposed Action, there would be a direct disturbance of approximately 14.3 acres of land available for dispersed recreation during construction and operation. Some displacement of recreationists may occur during construction, particularly to those seeking a more primitive oriented backcountry recreation experience. It is likely that the two-track route leading to the east from the proposed well pad is used by big game hunters to access a dispersed camping area, as well as the two-track route to the north of the proposed well pad. Post construction, big game hunters are still expected to hunt in the general vicinity of the well pad assuming big game is present in the area. If pad development and drilling activities coincide with the various hunting seasons (late August through December), there may be a disruption to the hunting experience; however, this disruption will be temporary in nature and of short duration. Hunter traffic and construction traffic may a cause a potential safety issue on this road. To allow egress and ingress traffic flow in this area and in case of emergencies, it is critical that the re-routed portion of BLM Road 1509 be constructed and be available and open for public use before the existing route is closed for public use to provide access to this large portion of public lands. Because many of the big game hunters in this area travel from across the country each year to this area it is recommended that the operator notify the Authorized Officer at least two weeks in advance of beginning construction on the low water crossing on Crooked Wash, and for any anticipated road closures for BLM 1509. This notification will allow BLM to notify the public of road closures due to construction. The south intersection of the existing BLM Road 1509 and the proposed re-route as identified in the Surface Use Plan of Operations could result in confusion or traffic driving up on the well pad from northbound travelers if this intersection is not signed properly. In order to prevent this from happening, the BLM will install a new sign at this intersection indicating the re-routed BLM Road 1509. This situation is not likely to occur at the north intersection because a slash pile and then soil storage are proposed between the well pad and this intersection creating a visual and physical barrier to prevent any confusion.

Cumulative Effects: There is currently not a lot of energy development within the vicinity of the proposed well pad so even if activity associated with construction and drilling activities were to disrupt big game hunters or other recreationists, there would be other opportunities available within the Crooked Wash watershed. If the construction activities occur during the big game hunting seasons, there will be impacts to more individuals than other times

of the year with regards to their travel times, dispersed camping opportunities and potentially hunting opportunities in this particular area during this time.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: By not constructing the well pad, pipeline, or re-routing BLM Road 1509, there would be no new impacts to recreation settings and opportunities.

Cumulative Effects: None identified as a result of this alternative.

Mitigation:

1. Avoid, if possible, constructing the well pad and road re-route during fall big game hunting seasons primarily from mid-October through mid-November.

2. The re-routed portion of BLM Road 1509 must be constructed and open for public use before the existing route is closed for public use.

3. The operator will notify the authorized officer at least two weeks in advance of beginning construction on the low water crossing on Crooked Wash, and for any anticipated road closures for BLM 1509. Notification will allow BLM representatives to be present during construction and allow BLM to notify the public of road closure due to construction.

ACCESS AND TRANSPORTATION

Affected Environment: Access for the proposed well pad location will come in from the south, off State Highway 64 approximately 30 miles west of Meeker, CO. From there, access will travel approximately 3.2 miles along Rio Blanco County Road 77 (Smizer Gulch) to the junction with BLM Road 1509 (Crooked Wash). Access will travel approximately five miles along BLM Road 1509 to the proposed well pad. Traffic experienced in the area is related primarily to agricultural uses, oil and gas, and hunting. Rio Blanco County Road 77 is an annually maintained route that is a mixture of natural and gravel surface that experiences use oil and gas use year around to access well pads to the east of the Proposed Action. BLM Road 1509 is a graveled all weather route for the first mile then it is a intermittently maintained natural surfaced route. BLM Road 1509 is used by a small amount of recreationalists year round when conditions permits and by a moderate to high amount of big game hunters to access public lands from late August through December with peak use from mid-October through mid-November of each year. The route provides the only full sized vehicle access between State Highways 64 and 40 and accesses a variety of other public routes and a large portion of public lands in this area. The majority of use on this route occurs from big game hunters from mid-October through mid-November of each year. Big game hunters in this area come from all across the country to this area each year.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action will use RBC 77 and BLM Road 1509 as the primary access route. The amount of traffic along this road will increase as construction begins, and the large trucks and construction activities may temporarily interrupt the flow of

traffic on these routes. A properly designed crossing for Crooked Wash and a well-designed access road with adequate drainage features and a stable all-weather travel surface will provide improved and sustainable access for the public traveling this route. (See Soils section for details) Continued use of roads with compromised drainage features could result in long-term degrading of traveling conditions and a reduction in access to public lands should the road become impassible. Surfacing the road with gravel or road base can be used to augment the stability of native soils to make an all-weather surface. The widening of and improvement to portions of BLM Road 1509 to an all-weather conditions type route to the proposed well pad location may increase the amount of traffic in the area by the public, but should provide improved travel conditions, reduced travel times, and improved access once complete. Dust may increase during construction and during dry conditions that may impair visibility to see oncoming traffic and corners on steep slopes. Hunter traffic and construction traffic on BLM Road 1509 may a cause a potential safety issue on this road. Roads under construction are required to be signed according to the current edition of the Federal Highway Administration "Manual of Uniform Traffic Control Devices" (BLM 9113-Roads Manual). To allow egress and ingress traffic flow in this area and in case of emergencies, it is critical that the re-routed portion of BLM Road 1509 be constructed and be available and open for public use before the existing route is closed for public use to provide access to this large portion of public lands. Because many of the big game hunters in this area travel from across the country each year to this area it is recommended that the operator notify the authorized officer at least two weeks in advance of beginning construction on the low water crossing on Crooked Wash, and for any anticipated road closures for BLM 1509. The south intersection of the existing BLM Road 1509 and the proposed re-route as identified in the Surface Use Plan of Operations could result in confusion or travelers driving up on the well pad from northbound travelers if this intersection is not signed properly. In order to prevent this from happening, the BLM will install a new sign at this intersection indicating the re-routed BLM Road 1509. This situation is not likely to occur at the north intersection because a slash pile and then soil storage are proposed between the well pad and this intersection creating a visual and physical barrier to prevent any confusion. In order to provide the most efficient and intuitive travel route through this area, it is recommended that upon final reclamation that re-routed portion of BLM Road 1509 be fully reclaimed to its natural condition and that the route returned to the existing BLM Road 1509 alignment.

Cumulative Effects: There is currently not a lot of energy development within the vicinity of the proposed well pad so even if activity associated with construction and drilling activities were to disrupt big game hunters or other recreationists, there would be other opportunities available within the Crooked Wash watershed. If the construction activities occur during the big game hunting seasons, there will be impacts to more individuals than other times of the year with regards to their travel times, dispersed camping opportunities and potentially hunting opportunities in this particular area during this time.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: By not constructing the well pad, pipeline, or re-routing BLM Road 1509, there would be no new impacts to recreation settings and opportunities. BLM Road 1509 would not be improved to the proposed well pad, so this long-term benefit would not be gained by those traveling this route.

Cumulative Effects: None identified as a result of this alternative.

Mitigation:

1. Roads under construction are required to be signed according to the current edition of the Federal Highway Administration "Manual of Uniform Traffic Control Devices" (BLM 9113-Roads Manual).

2. Avoid, if possible, constructing the well pad and road re-route during fall big game hunting seasons primarily in the months of October and November.

3. The re-routed portion of BLM Road 1509 must be constructed and be available and open for use before the existing route is closed for public use.

4. The operator will notify the authorized officer at least two weeks in advance of beginning construction on the low water crossing on Crooked Wash, and for any anticipated road closures for BLM 1509. Notification will allow BLM representatives to be present during construction and allow BLM to notify the public of road closure due to construction.

5. BLM will monitor the re-routed portion of BLM 1509 if it is successful the road may be left in the re-routed location, if monitoring indicates it, the road may be returned to original route upon final reclamation.

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TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED:

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Soils	2/11/2014
Heather Woodruff	Range Management Specialist/Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species; Forest Management	12/19/2013
Michael Selle	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	12/9/2013
Matt Dupire	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	3/5/2014
Lisa Belmonte	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	3/5/2014
Ryan Snyder	Natural Resource Specialist	Hazardous or Solid Wastes	4/16/2014
Aaron Grimes	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	1/23/2014
Kyle Frary	Fire Management Specialist	Fire Management	2/3/2014
Paul Daggett	Mining Engineer	Geology and Minerals	1/27/2014
Stacey Burke	Realty Specialist	Realty	2/5/2014
Melissa J. Kindall	Range Technician	Wild Horse Management	1/17/2014
Ryan Snyder	Natural Resource Specialist	Project Lead – Document Preparer	4/16/2014
Heather Sauls	Planning & Environmental Coordinator	NEPA Compliance	4/29/2014

ATTACHMENTS:

Figure 1: Map of the Project
Attachment 1: Surface Use Plan of Operations

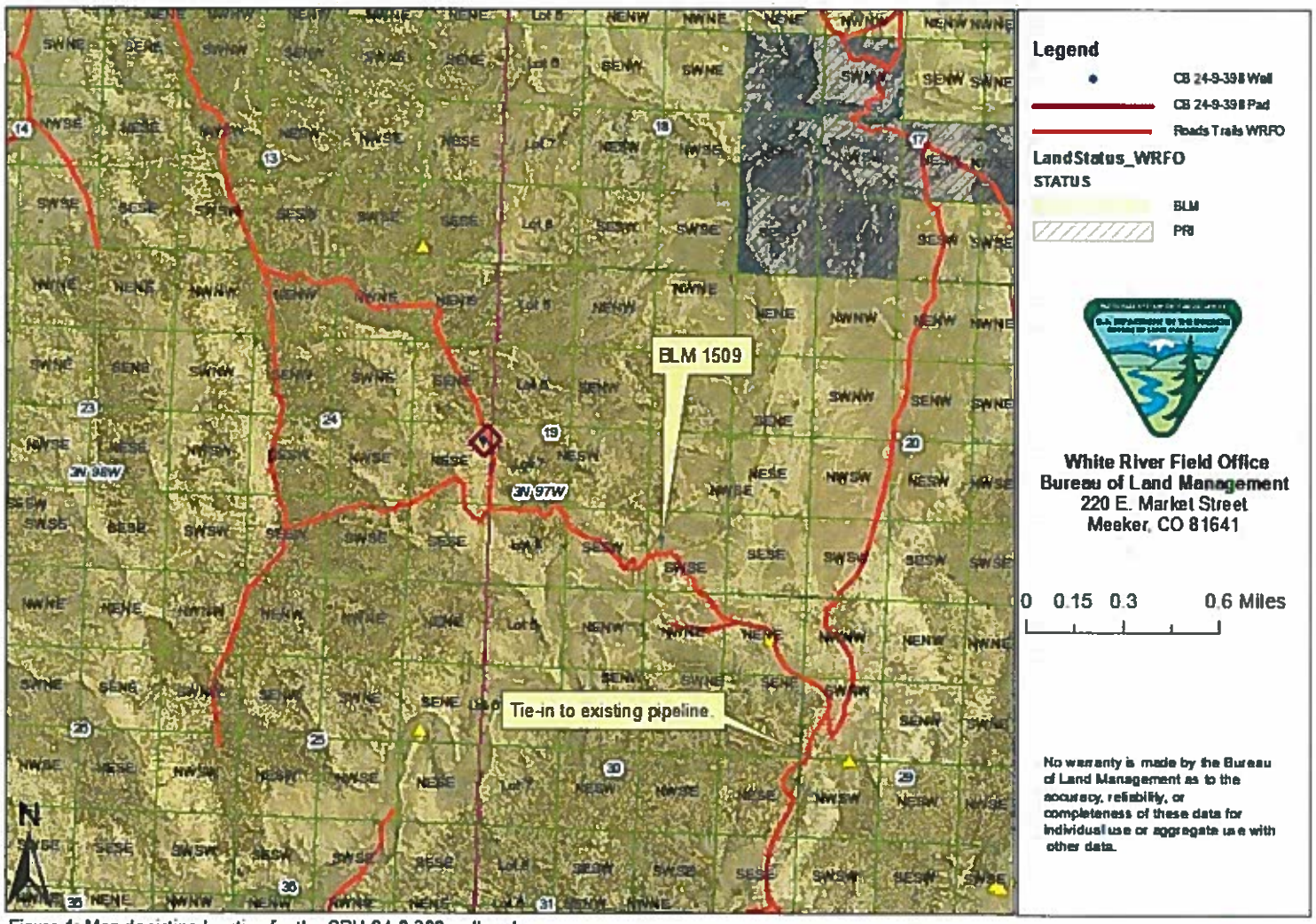

Figure 1: Map depicting location for the CBU-24-9-398 well pad.

Attachment 1

Mesa Energy Partners, LLC
CBU 24-9-398
2373 FSL 114 FEL (NE/4 SE/4)
Sec. 24 T3N R98W
Rio Blanco County, Colorado
Surface: Federal
Federal Mineral Lease: COC65825

SURFACE USE PLAN OF OPERATIONS

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. This NOS process included an onsite meeting held on April 4, 2012, prior to the submittal of the application, at which time the specific concerns of Mesa Energy Partners, LLC (MEP) and the BLM were discussed. All specific concerns of the BLM representatives are addressed herein, as are specific stipulations from the BLM.

WELL LOCATION AND INTRODUCTION:
The wellsite was originally staked on February 9, 2012, by GeoSurv Land Surveying and Mapping (GeoSurv), surveyor, on behalf of MEP, at a site that is geologically and topographically acceptable. The wellsite lies within the federal Coyote Basin Unit boundary.

A NOS was submitted to the BLM WRFO in Meeker on February 10, 2012, for this location. An onsite meeting was held on April 4, 2012. Attending were from BLM: Ryan Sandefur, Heather Woodruff, Matt Dupire, Bob Lange, and Laura Dixon. Mesa Energy: Dave Cesark. GeoSurv: Jim Grabowski.

Following the onsite, at the request of the BLM-WRFO, the originally-staked drillsite location was moved slightly SE to its current location in order to minimize cut/fill as much as possible.

DIRECTIONS TO LOCATION:
MP 0.0 - Intersection of Highway 64 & Highway 139; East on Highway 64
MP 27.4 - Left on CR 77 at Mile Post 47.3 on Hwy 64
MP 30.6 - Left on BLM RD 1509
MP 31.4 - Left on BLM RD 1509 at Intersection of BLM RD 1509 & 1511
MP 32.8 - Bear right on BLM RD 1509 at Intersection of BLM RD 1509 & 1728
MP 35.2 - Coyote Basin 24-9-398 Pad

1) EXISTING ROADS (See Access Road, Road Construction Drawings, and Vicinity maps)

A) The well is an exploratory well.

B) Existing roads within 1.00 mile consist of BLM Road 1509, which will provide direct access to the proposed location.

C) MEP will upgrade BLM Road 1509 from MP 2.65 to MP 4.45 totaling approximately 1.8 miles, most of which is off-lease, but on-unit. Travel surface width to be approximately 16', total disturbed width to be no more than 100' in certain areas to widen curves where existing steep, sharp turns exist in order to accommodate a rig move. A total of four 18" and one 24" culvert, seven water bars, and one low water crossing upgrade, as well as 15 turnouts will be installed on this 1.8 mile section of the existing BLM Road 1509 in order to upgrade the road (please refer to BLM RD 1509 ACCESS survey plats and Road Construction Drawings for more detail).

D) Plans for improvement and/or maintenance of existing roads are to maintain in as good or better condition than at present.

E) Maximum grade – the average grade will be 10% or less, wherever possible. The 10% grade will only be exceeded in areas where physical terrain or unusual circumstances require it. The maximum existing grade exceeds 16% in places. Those areas will be regraded so as not to exceed 16% - see attached Road Construction Drawings.

2) PLANNED ACCESS ROADS (See Access Road map)

No new road construction is required to access the proposed pad. Existing BLM Road 1509 will be utilized for pad access– Sec. 19 T3N R97W – BLM off lease. However, approximately 1,000' of BLM Road 1509 will be realigned around the pad, much of which is off-lease, in order to utilize the existing road to access the pad. The access road will be maintained so as to meet BLM Manual Section 9113 standards for road shape and drainage features at all times during construction, drilling and production.

A) Travel surface width to be approximately 16', total construction width to be no more than 50'. A regular maintenance plan will include, but not be limited to blading, ditching, and surfacing.

B) Borrow ditches to be backsloped 3:1 or shallower. Weather permitting, the access road will be mowed and the borrow ditch material will be pulled over the top of the mowed area.

C) Maximum grade existing access road grade (where it enters the pad) is 4%.

D) One new 18" culvert will be installed prior to commencement of drilling operations in the new proposed access road. Drainage to consist of wing ditches between the access road and the wellsite and will be installed prior to commencing drilling operations. The borrow ditches along the proposed access road will be re-seeded. The reseeding of the borrow ditches will reduce the area utilized by this location.

E) Surfacing material, if necessary, to consist of native material from borrow ditches. Topsoil will be saved on the backslope of the borrow ditches, separate from other native material. Crown will be constructed from excess native materials pulled from borrow ditches and initial road grading, and will be of sufficient grade as described above.

F) No major road cuts are necessary. Fill if needed, will come from excess native materials pulled from borrow ditches and initial road grading.

G) No turnouts are required.

H) Existing cattleguards (if any) will be repaired/replaced as necessary as a result of damage resulting from rig moves.

I) Road construction on public lands shall meet the minimum standards listed in BLM Manual Section 9113 and shall be constructed under the direction of a qualified construction supervisor(s). The qualified construction supervisor shall be an engineer, company superintendent or other representative who is competent and knowledgeable in

oilfield road and drillsite construction, and able to speak for the operator. The dirt contractor, or drilling/completion foreman whose primary expertise is not in construction, do not qualify as construction supervisors.

J) For more information how planned access roads are handled in the Preconstruction/Construction/Interim/Final Reclamation stages please refer to the attached survey plat package.

3) LOCATION OF EXISTING WELLS

Within a 1-mile radius (*see attached Well Vicinity Map for exact location):

*Proposed	Mesa Energy Partners Coyote Basin Unit #13-16-398
Drilling	NONE
*Abandoned	Trident Company Coyote Basin Unit 02423 #3 Disposal/injection
NONE	
Shut-In	NONE
Producing	NONE

LOCATION OF EXISTING PRODUCING FACILITIES OPERATED BY MESA ENERGY PARTNERS, LLC

Within one (1) mile: NONE

The nearby well data was taken from the COGCC website on October 18, 2012.

4) NEW PRODUCTION FACILITIES PROPOSED

A) The production facilities shall initially consist of a pump jack, separator, two 400 barrel capacity stock tanks, and a meter house. BLM will be contacted via Sundry Notice (SN) if the production facilities change.

B) Dimension of the proposed pad is 320' x 400' = 128,000 ft^2 or 2.94 acres for drilling operations. Approximate total disturbed area of pad (including stormwater BMPs) is ±5.3 acres. Total disturbed area for pipeline ROW (assuming 10,000' long and 50' wide [excluding 16' running surface]) is ±7.8 acres- see Proposed Pipeline Map.

C) Traveled portion of the production site will be gravel surfaced if necessary upon completion of production facility installation and prior to production. Site preparation for production will be done with standard excavation equipment using native materials whenever possible. Additional surface material (if required) will be obtained from commercial sources or another approved borrow area. MEP will notify the BLM via SN when an exact source has been determined. Construction and maintenance will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment.

D) All above ground permanent structures will be painted to blend with the surrounding landscape and per BLM recommendations. The typical paint color for this area is "Juniper Green" (no Munsell color). All production facilities will be painted within six months of installation. Facilities that are required to comply with Occupation Safety and Health Administration (OSHA) Rules and Regulations will be excluded from this painting requirement. The tallest structure will be no greater than 20' in height.

E) A lined secondary containment ring will be constructed around any production tanks. This ring will be, hold 110% of the capacity of the largest tank, and be independent of the back cut.

F) Produced water will be trucked to the on-unit Pinyon Ridge Fed C1W disposal well located in the NE/SE of Sec. 21 T3N/R97W.

G) Run off and sediment control Best Management Practices (BMPs) will be implemented and maintained according to MEP's General Permit to Discharge Stormwater under the Colorado Pollutant Discharge Elimination System.

H) MEP shall protect all survey monuments, witness corners, reference monuments and bearing trees in the affected areas against disturbance during construction, operation, maintenance and termination of the facilities authorized herein.

I) MEP shall immediately notify the Authorized Officer (AO) in the event that any corners, monuments or markers are disturbed or are anticipated to be disturbed. If any monuments, corner or accessories are destroyed, obliterated or damaged during construction, operation or maintenance, MEP shall secure the services of a Registered Land Surveyor to restore the disturbed monuments, corner or accessories, at the same location, using surveying procedures found in the Manual of Surveying Instructions for the Survey of the public Lands of the United States, latest edition. MEP shall ensure that the Registered Land Surveyor properly records the survey in compliance with the Colorado Revised Statues 38-53-101 through 38-53-112 (1973) and shall send a copy to the AO.

5) LOCATION OF WATER SUPPLY

A) Water to be used for the drilling and completion of this well may be delivered to the location via truck hauling over the roads: CO 64, CR 77, BLM 1509. The water source may be from (1) recycled flow back water (frac water from completions), production water gathered from producing wells, or some combination thereof resulting from ongoing operations in the Piceance Basin that may be treated for reuse, or (2) fresh water from available water rights in the Piceance Basin.

B) The fresh water providers are Williams and/or EnCana. Due to possible water restrictions it is imperative that multiple sources be available for use. Williams' fresh water will come from their nearby *Ryan Gulch Ranch* fresh water loadout located at 39.864375 latitude and 108.430068 longitude, NAD83, and will utilize CR 86, CR 24, CR 5, CO 64, CR 77, BLM 1509. EnCana's fresh water source will come from the *Foote Ranch* loading facility located at -40.008838 latitude and 108.24631 longitude, NAD83, and will utilize CR 24, CR 5, CO 64, CR 77, BLM 1509. When a specific location is known for fresh water supply the BLM will be notified via SN.

C) MEP estimates that we will use ~5,000 bbls of fresh water for drilling, and up to75,000 bbls of either fresh and/or recycled water for completions. The amount of water used for dust abatement is estimated to be ~ 1,000 bbls/year. The above roads will be utilized to transport the water required for operations.

6) SOURCE OF CONSTRUCTION MATERIALS

A) Construction materials will consist of native materials from borrow ditches and location areas.

B) Surfacing materials will be obtained from the Connell commercial gravel pit located in White River City at the intersection of CO 64 and RBC 5, if needed, and consist of pit gravel. No additional construction material from other sources is anticipated at this time. If, in the future it is required, the appropriate actions will be taken to acquire it from private sources. A sundry notice will be submitted stating the intended source of the materials

C) All access roads crossing Federal land are described under Item #2, and shown on Access Road and Vicinity Maps.

D) All trees (if any) on the location, access road, and proposed pipeline routes shall be purchased prior to construction from the Bureau of Land Management, White River Resource Area, and disposed of by one of the following methods:

E) Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public. Trees will not be dozed off the location or access road, except on private surface where trees may be dozed.

F) Limbs may be scattered off location, access road or along the pipeline, but not dozed off. Trees may also be dozed on pipeline routes and then pulled back onto right-of-way as part of final reclamation.

G) Plan to utilize site slash (site vegetation trees, shrubs, forbs & grasses) where available, in preconstruction BMP's and permanent stormwater BMP's as sediment control within our limits of disturbance on access roads, pipelines and facility construction.

H) Woody material may be chipped and stockpiled if required for later use in reclamation. Wood chips can be incorporated into the topsoil layer to add an organic component to the soil to aid in reclamation success depending on soil conditions.

I) Woody materials, not used for woods chips required for reclamation shall be removed in whole with limbs intact and shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20-30% ground cover. Limbed material shall be scattered across reclaimed areas in a manner that avoids the development of a mulch layer that suppresses growth or reproduction of desirable vegetation. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.

7) WASTE DISPOSAL

MEP plans to utilize a closed-loop mud system for drilling mud. The drilling mud will be stored onsite in 4-400 barrel upright storage tanks (see Typical Rig Layout diagram, attached). As per BLM's MOU with COGCC, the moisture content of any drill cuttings in a cuttings pit (see Pad Layout diagram- attached) will be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. MEP may utilize a shaker system with introduction of organic materials such as sawdust or gypsum to adequately dry cuttings, if required. At the time of closure the cuttings must also meet the applicable standards of COGCC Table 910-1. Provided MEP is unable to achieve COGCC standards, the cuttings will be removed to the Rio Blanco County Wray Gulch Landfill for disposal (see Ancillary Facility Map). During IR, excess materials would get shaped over cuttings with a minimum 3 foot layer and topsoil would be spread across that.

A) Flare pit for air drilling will (if used) be located a minimum of 100' from the well bore.

B) Produced water will be trucked to either the F11X disposal well located in SE/NE of Sec. 11/T1S/R99W and/or Pinyon Ridge Fed C1W disposal well located in the NE/SE of Sec. 21 T3N/R97W or to Williams' Ryan Gulch Unit for re-use during completion and testing (site varies). A SN will need to be submitted on where the produced water will go providing the specific location on the Ryan Gulch Unit when known.

C) Drilling fluids including salts and chemicals will be contained within the closed loop drilling system. Within six months upon termination of drilling and completion operations, the mud will be transferred to another drilling location for recycling/reuse as per COGCC Rule 903. If the mud is not needed elsewhere, all drilling fluids may be treated and disposed of onsite or disposed of through injection into a permitted Class II well (COGCC Rule 325, i.e. Pinyon Ridge Fed C1W). MEP will file a SN either way notifying BLM of our plans (when known) for the drilling mud.

D) In the event that adverse weather conditions prevent removal of the fluids from the mud system within this time period, an extension may be granted by the AO upon receipt of a written request from MEP.

E) Produced fluids – liquid hydrocarbons produced during completion operations will be sold at the wellsite and trucked by the new owner to an undetermined ancillary facility for sale. There may be in fact multiple destinations depending on a number of factors which cannot be foreseen at this time. MEP has no control over the destination of those products once they are sold and leave the wellsite. Produced waste water will be trucked to the Pinyon Ridge Fed C1W disposal well located NESE of Sec. 21 T3N R97W for disposal. It may also be reused for completion at another MEP well or transported to Williams' Ryan Gulch Unit for reuse (location varies – notice will be provided once the location is determined).

G) Sewage disposal facilities will be in accordance with State and Local Regulations. Sewage may not be buried on location or put in a borehole. Colorado Department of Public Health and Environmental (CDPHE) Regulations prevent this unless a CDPHE Permit is obtained.

H) Refuse and other waste - burnable waste will be contained in a portable trash cage which will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a CDPHE-approved Sanitary Landfill upon completion of operations.

I) Trash will be picked up, if scattered, and contained in trash cage as soon as practical after rig is moved off.

J) Upon release of the drilling rig, rathole and mousehole will be filled. Debris and equipment not required for production will be removed.

K) Any reportable spills of oil, gas, salt water or other potentially hazardous substances will be reported immediately to the BLM, and other responsible parties, and will be mitigated immediately, as appropriate, through clean up or removal to an approved disposal site.

8) ANCILLARY FACILITIES

A) Self-contained travel-type trailers may be used on site during drilling operations.

B) Certified Colorado Division of Housing units will be provided for use by Essential Personnel and will abide by Federal, State, and local regulations which directly pertain to Temporary Living Quarters (TLQ).

C) Potable water will be provided by water haulers certified by the Colorado Department of Public Health & Environment.

D) Septic will be held in County-approved engineered Individual Sewage Disposal System Vault and Haul systems and disposed of at the Meeker Sanitation District Plant as indicated on the attached Ancillary Facilities Map.

E) Waste materials generated by and from these units will be contained in wildlife proof containers and will be hauled weekly, or as necessary.

9) WELLSITE LAYOUT (Pad Layout, Production Schematic, Typical Rig Layout and Existing Contours.)

A) See attached Pad Layout and Cross Sections diagrams.

B) Roads and well production equipment, such as tanks, treaters, separators, vents, electrical boxes, and equipment associated with pipeline operation, will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment may be moved so proper re-contouring and revegetation can occur.

C) Six inches (or more where available) of topsoil will be removed during pad construction from the cuttings pit area and/or any other disturbed areas, including pad perimeter stormwater BMPs such as sediment reservoirs and stormwater control ditches. Topsoil will be stockpiled adjacent to the wellsite within the maximum disturbed area shown on the wellsite plat. Temporary seeding will take place soon after well pad construction on all disturbed areas outside the active portion of the well pad using BLM Native Seed Mix #3 or another approved seed mix in order to help stabilize the site until IR occurs.

D) Topsoil and spoils pile will be clearly separated as shown on Pad Layout.

E) Erosion control measures will be applied pursuant to MEP's General Permit to Discharge Stormwater under the Colorado Pollutant Discharge Elimination System.

F) To control drainage, the Best Management Practices for this location are perimeter ditch/berm, cut slope diversion, etc. (refer to Pad Layout diagram for details).

10) PIPELINES AND FLOWLINES

The proposed natural gas flowline will remain inside of the Coyote Basin Unit boundary. Therefore, no separate Right-of-Way application will be necessary for the proposed pipeline. During the proposed road and pipeline construction MEP will overlap the existing road widening with the ROW construction corridor as much as possible to reduce surface disturbance. Total disturbed area for pipeline ROW is estimated to be ±7.8 acres, based on a 50' pipeline ROW, minus the 16' running surface.

A) The proposed pipeline will be buried to a depth of 3 feet, except at road crossings where they will be buried to a depth of 4 feet.

B) Construction width of the right-of-way/pipeline route shall be restricted to 50 feet of disturbance, including the 16' roadway, for an additional temporary disturbance of 34 feet.

C) Reclamation width of the right-of-way/pipeline route shall be approximately 50 feet, minus a 16' running surface. Timing of reclamation will be determined according to when construction takes place. Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding would be conducted after the frost leaves the ground. Soil treatments are not deemed to be necessary at this time.

D) Length of proposed pipeline to tie-in of existing gas pipeline is approximately 10,000 feet.

E) The proposed natural gas flow line will follow BLM Road 1509 as indicated on the Proposed Pipeline Map. The line will tie into an established line.

11) SURFACE RESTORATION (Applicable to all areas of disturbance including the access road, pipeline corridor, and well pad)

A) Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment.

B) Earthwork for interim or final reclamation must be completed within six (6) months of well completion or plugging (weather permitting).

C) In areas that will not be drill-seeded, the seed mix will be broadcast-seeded at twice the application rate prescribed.

D) Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding would be conducted after the frost leaves the ground. Topsoil will be seeded on a temporary basis to preserve the integrity if interim reclamation is delayed to the next growing season.

E) Annual or noxious weeds shall be controlled on all disturbed areas as directed by the Field Office Manager. An intensive weed monitoring and control program will be implemented beginning the first growing season after interim and final reclamation. Noxious weeds that have been identified during monitoring will be promptly treated and controlled. A Pesticide Use Proposal (PUP) is pending for approval prior to the use of herbicides. All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species. The operator will coordinate all weed control measures with BLM, state, and/or local management agencies.

F) Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.

G) Reclamation monitoring will be documented in a reclamation report and submitted to the WRFO.

H) The WRFO will be informed when reclamation has been completed, is successful, and the site is ready for final inspection.

12) <u>INTERIM RESTORATION (Production: Applicable to all areas of disturbance on the pad and access road not needed for production or access)</u>

A) Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring, back sloping and contouring all cut & fill slopes. These areas will be re-seeded.

B) Wellpad size will be reduced to minimum size necessary to conduct safe operations. Cuts and fills will be reduced to 3:1 or less slope, whenever practicable.

C) Immediately upon well completion, any hydrocarbons or trash in the flare and cuttings pits will be removed. Pits will be allowed to dry, be pumped dry, or solidified in-situ prior to backfilling.

D) Following completion activities, when dry, the pits will be backfilled with a minimum of three feet of soil material. In relatively flat areas, the pit area will be slightly mounded to allow for settling and to promote surface drainage away from the backfilled pit.

E) The portions of the cleared well site not needed for operational and safety purposes will be re-contoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after re-contouring to allow for maximum interim reclamation.

F) Topsoil will be evenly re-spread and aggressively re-vegetated over the entire disturbed area not needed for all-weather operations including road cuts & fills and to within a few feet of the production facilities.

G) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4" - 6" inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown below) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut & fill slopes.

H) To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, debris, and rock over re-contoured cut & fill slopes.

I) A possible seed mixture for this location is: BLM Native Seed Mix #3

J) Reclamation growth will be considered successful if the following criteria are met:

- 70% of pre-disturbance cover
- 90% dominate species*
- Erosion features equal to or less than surrounding area

**The vegetation will consist of species included in the seed mix and/or occurring in the surrounding natural vegetation. Pre-disturbance cover is based on the nearby Reference Area (mapped/photographed) based on COGCC 1003 Series Interim Reclamation Regulations.*

K) To control drainage during interim reclamation some of the BMP's for this pad include maintaining a bar ditch around the perimeter of the reclaimed pad with check dams.

13) FINAL RESTORATION (P & A – Removal of equipment)

A) Flowlines on location will be removed before site reclamation and all flowlines between the wellsite and production facilities will remain in place and will be flushed with water and capped at both ends.

B) If necessary to ensure timely revegetation, the pad will be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4th Edition.

C) Revegetation will be accomplished by planting mixed grasses as specified below. Revegetation is recommended for road area as well as around production site.

D) A proposed seed mixture for this location is:

- BLM Native Seed Mix #3

E) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4" to 6" within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown above) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut & fill slopes.

F) All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be re-contoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Re-salvaged topsoil will be spread evenly over the entire disturbed site to ensure successful revegetation. To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over re-contoured cut & fill slopes.

G) At final reclamation all stormwater management BMP's for drainage, sediment, and erosion will be removed in order to return the site to its natural state. All sediment will be managed through revegetation practices (seeding on contour, crimping straw on contour and/or erosion control hydro-mulch, pocking and topsoil distribution. Downgradient wattles will remain until vegetation establishment meets minimum requirements. Any stormwater management features utilized for final reclamation will be removed prior to FAN approval.

14) GENERAL INFORMATION

A) Location is on a ridge top with rocky outcrops on the edge of the ridge.

B) Topographic and geologic features The pad site is at a mild slope.

C) Soil characteristics – loam.

D) Woody cover (by aerial extent): Pinion and juniper woodland covers the edges of the proposed pad and within the western and some northern parts of the pad. Shrubs present: Wyoming big sagebrush, greasewood, shadscale. Grasses and Forbs present: Western wheatgrass, Sandberg's bluegrass, galleta grass, saline wildrye, Indian rice grass, needle and thread, bottlebrush squirrel tail, blue bunch wheat grass, broom snakeweed, pussy toes, phlox spp., Buckwheat spp., *Penstomen* spp., sweetvetch, *Astragalus* spp.,

Sego lily, *Lomatium* spp., bladderpod, spp., prickly cactus. Noxious/Invasive Species: Tumble mustard and cheat grass.

E) Fauna observed: none; assume: mule deer, elk, coyotes, rabbits, raptors, prairie dogs, and rodents.

F) Concurrent surface use - grazing and hunting.

G) Mineral Lessor - Bureau of Land Management
White River Field Office
220 E. Market Street
Meeker, CO 81641 Phone: 970-878-3800

H) Surface Owner
Drillsite/Access- Bureau of Land Management
White River Field Office
220 E. Market Street
Meeker, CO 81641 Phone: 970-878-3800

I) Proximity of water, occupied dwellings or other features: two unnamed intermittent drainages were identified, one ±230 feet to the northeast, and another ±100 feet to the northeast. In addition there was stock pond located ±330 feet to the southeast (see Location Drawing).

J) Archaeological, cultural and historical information for the new construction on federal lands was submitted separately in a report filed by Grand River Institute.

K) If any fossils are discovered during construction, the operator shall cease construction immediately and notify the AO so as to determine the significance of the discovery.

L) The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the AO. The AO will inform the operator as to the work needed to determine the following:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the site can be used (assuming in site preservation is not necessary); and,
- A timeframe for the AO to complete an expedited review to acquire the State Historic Preservation Officer's concurrence that the findings of the AO are correct and that mitigation is appropriate.

M) MEP maintains a file, per 29 CFR 1910.1200(g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be transported across these lands may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous substances, EHS, and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

15) REPRESENTATIVES AND CERTIFICATION

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved Application for Permit to Drill will be furnished to the field representatives to ensure compliance and shall be on location during all construction and drilling operations.

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal Laws applicable to this operation; that the statements made in this APD Package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD Package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for filing false statements.

Executed this 11th day of June, 2013.

_____

David R. Cesark
V.P. - Environmental & Regulatory Affairs
Mesa Energy Partners, LLC
1001 17th Street, Suite 1140
Denver, CO 80202
(970) 683-5447

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

Finding of No Significant Impact (FONSI)

DOI-BLM-CO-110-2013-0100-EA

BACKGROUND

A Notice of Staking (NOS) was submitted to the WRFO in Meeker, CO on February 10, 2012, for this location. An onsite meeting was held on April 4, 2012. Following the onsite, at the request of the BLM-WRFO, the originally-staked drill site location was moved slightly SE to its current location in order to minimize cut/fill as much as possible. Road maintenance and upgrades to the BLM Road 1509 were analyzed in DOI-BLM-CO-110-2012-0008-EA.

Mesa Energy Partners (MEP) is proposing to drill an exploratory well at T3N R98W NESE Section 24. This well will be directionally drilled in order to abide by having the bottom hole at least 660 feet from the lease line. This well pad will be for a single well with the dimensions of 320 feet by 400 feet for a 2.94 acre well pad with a disturbance of 5.3 acres for the pad area when including the storm water features (Figure 1). The total initial disturbance including the access road, pipeline and well pad will be 14.3 acres; however, the disturbance will reduce to 1.4 acres after interim reclamation.

FINDING OF NO SIGNFICANT IMPACT

Based upon a review of the EA and the supporting documents, I have determined that the Proposed Action will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the White River Resource Area Proposed Resource Management Plan and Final Environmental Impact Statement (1996). Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

Context

The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance. The lease area has been developed for purposes of oil and gas exploration, extraction and development, and anthropogenic disturbance (e.g., well pads, pipeline corridors, and other oil and gas infrastructure) are the dominant disturbance within the lease.

Intensity

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

1. Impacts that may be both beneficial and adverse.
The depletion of the subsurface petroleum reservoir in general is a beneficial impact that adds to domestic energy reserves. While surface impacts would be short-term and of low intensity, improper implementation of approved techniques for construction and reclamation has potential to adversely impact surface resources at a higher intensity and time duration than anticipated.

2. The degree to which the Proposed Action affects public health or safety.
There would be no impact to public health and safety if the safety measures described in the operator's drilling plan and SUPO are properly implemented, and the developed mitigation is adhered to.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
No prime farmlands, parklands, ecologically critical areas or scenic rivers occur in the project area.

4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.
No comments or concerns have been received regarding possible effects on the quality of the human environment.

5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.
No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Similar proposals to drill wells with associated pipelines and access roads have been evaluated and approved, so authorization to drill the proposed well would not set a precedent for future actions.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
Rangeland used for livestock grazing has been described as populated with some cheatgrass; implementation of the Proposed Action alone would not substantially contribute to the quality of the rangeland resources but an increase in construction-related oil and gas activities (reasonable but not yet proposed or speculated for the project area) could cumulatively result in irreversible changes to plant species composition. The winter ranges north of the White River remain one of the few areas with limited oil and gas-related development. Increased and expansive development in this area would be expected to contribute to reductions in big game winter habitat.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
The proposed well pad location and access route have been inventoried at the Class III level, which did not identify any sites that could be directly impacted by development.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973.
No special status plant species concerns have been identified. Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-ft depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with this project would be entered into the WRFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.
Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL: Acting Field Manager

DATE SIGNED: 7/26/14 (Saturday)

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

DECISION RECORD

PROJECT NAME: Mesa CBU 24-9-398 Well

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-110-2013-0100-EA

DECISION

It is my decision to implement the Proposed Action as mitigated in DOI-BLM-CO-110-2013-0100-EA, authorizing the construction, operation, and maintenance of the Mesa CBU 24-9-398 well, associated pipeline, and re-route of BLM Road 1509.

Mitigation Measures

Recommendations

1. BLM recommends using seed mix #5 listed below where the proposed pipeline and road upgrades cross the Crooked Wash drainage.

Table 6. Native Seed Mix #5

Cultivar	Species	Scientific Name	Application Rate (lbs. PLS/acre)
Magnar	Basin Wildrye	Leymus cinereus	3.5
Rosanna	Western Wheatgrass	Pascopyrum smithii	3.5
San Luis	Slender Wheatgrass	Elymus trachycaulus ssp. trachycaulus	3
Critana	Thickspike Wheatgrass	Elymus lanceolatus ssp. lanceolatus	3
Timp	Northern Sweetvetch	Hedysarum boreale	4.5
Maple Grove	Lewis Flax	Linum lewisii	1
Alternates:			
Sodar	Streambank Wheatgrass	Elymus lanceolatus ssp. psammophilus	3
	Scarlet Globemallow	Sphaeralcea coccinea	0.5

2. Avoid, if possible, constructing the well pad and road re-route during fall big game hunting seasons primarily in the months of mid- October and mid-November.

3. The holder will coordinate with existing ROW holders prior to any construction activity. The existing ROW holders are ETC Canyon Pipeline and Sonterra Energy.

Conditions of Approval

1. The operator will limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollution sources in accordance with all applicable state, federal and local air quality law and regulation.

2. The operator will treat all access roads with fresh water during construction and drilling activities so that there is not a visible dust trail behind vehicles. Mesa Energy has identified about 1,000 barrels of water per year for this purpose. The use of chemicals as a dust suppressant on BLM lands will require prior written approval from BLM.

3. The operator will armor the outfall below the culvert at mile marker 3.7 due to a headcut forming on the downhill side of the road.

4. The operator will notify the Authorized Officer at least two weeks in advance of beginning construction on the low water crossing on Crooked Wash, and for any anticipated road closures for BLM Road 1509. Notification will allow BLM representatives to be present during construction and allow BLM to notify the public of road closure due to construction.

5. The operator will surface the BLM 1509 road surface with gravel and/or road base from the Crooked Wash crossing to the pad and the new portion of road to reroute it around the pad, or if the running surface of the road begins to rut to a depth of 4 inches the use of the road will stop until the surface has dried. This road surfacing will be maintained by the lease holder to provide an all-weather surface on this road section until final reclamation is completed. Maintenance will include restoring the travel surface shape, road surfacing to maintaining an effective all-weather surface during drilling and production of the wells.

6. The operator will notify the authorized office at least two weeks in advance of when the road construction will be completed. This will allow BLM to do an inspection of the road design to insure compliance with the engineering plan, SUPO and mitigation.

7. To protect surface waters below the project area, the operator will keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.

8. Locate drainage dips and drainage ditches in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or dips.

9. When drilling to set the conductor and surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

10. In addition to the design features submitted by the applicant in the SUPO, the applicant shall use seed that is certified and free of noxious weeds. All seed tags will be submitted to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended via Sundry Notice (SN). The sundry will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

11. Surveys for midget faded rattlesnakes will be conducted if potential/suitable denning habitat is located within 200 meters of road upgrades (e.g., widening, turnouts etc., particularly between mile marker 3.6 and mile marker 3.8). Surveys should be conducted no earlier than April 15 and results provided to the BLM prior to construction initiation. Should an active den be located, no construction activities (road upgrades) or vegetation clearing will be permitted from April 15 – August 1 within 200 meters of the den. Minor modifications in road design may be necessary to avoid involvement with denning habitat. Site specific exceptions and modifications (e.g., daily timing restrictions) may be considered.

12. Vegetation removal associated with well pad, road and pipeline development will take place outside the migratory bird nesting season of May 15 through July 15. Earthwork associated with the Proposed Action will be permitted from July 16 through May 14.

13. A raptor survey will be completed and results submitted to BLM staff biologists prior to construction initiation. Should an active nest be found, the appropriated timing stipulations will be applied (TL-04, TL-01 per White River ROD/RMP).

14. Although it was committed by the Operator in the SUPO to paint the facilities, the language was not specific to the color chart and equipment as needed. The operator will paint all permanent above ground structures (on-site for six months or longer) including tanks, associated production equipment, and any piping and valves Juniper Green according to the BLM Standard Environmental Chart CC-001: June 2008.

15. Comply with all Federal, State and/or local laws, rules, regulations, statutes, standards and implementation plans. This includes but is not limited to, Onshore Orders, Surface Use Plans, State and Rio Blanco County permits.

16. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.

17. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in

secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

18. Lessee/Operators and ROW holders will report all emissions, releases, spills, leakages, blowouts, fires that may pose a risk of harm to human health or the environment, regardless of a substances's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.

19. As a reasonable and prudent lessees/operator and/or ROW holder in the oil and gas industry, acting in good faith, all lessees/operators and ROW holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or ROW holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

20. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
    a) The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
    b) The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
    c) The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.
    d) Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.
    e) Piled vegetation retained for reclamation as part of forest management mitigations shall be located at least twenty five feet from other receptive fuels.

21. In accordance with the 1997 White River RMP/ROD, all trees removed in the process of construction shall be purchased from the BLM. Trees should first be used in reclamation efforts and then any excess material made available for firewood or other uses.
    a. Woody materials required for reclamation shall be removed in whole with limbs intact and shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured and reseeded,

stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20percent ground cover. Limbed material shall be scattered across reclaimed areas in a manner that avoids the development of a mulch layer that suppresses growth or reproduction of desirable vegetation. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.

b. Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

22. Any range improvement projects such as fences, water developments, or other livestock handling/distribution facilities that are damaged or destroyed as a direct or indirect result of implementation of the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.

23. The re-routed portion of BLM Road 1509 must be constructed and open for public use before the existing route is closed for public use.

24. Roads under construction are required to be signed according to the current edition of the Federal Highway Administration "Manual of Uniform Traffic Control Devices" (BLM 9113-Roads Manual.)

25. BLM will monitor the re-routed portion of BLM 1509 if it is successful the road may be left in the re-routed location, if monitoring indicates it, the road may be returned to original route upon final reclamation.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

This decision is in compliance with the Endangered Species Act, and the National Historic Preservation Act. It is also in conformance with the 1997 White River Record of Decision/Approved Resource Management Plan.

ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action was analyzed in DOI-BLM-CO-2013-0100-EA and it was found to have no significant impacts, thus an EIS is not required.

PUBLIC INVOLVEMENT

Scoping was the primary mechanism used by the BLM to initially identify external and internal issues related to the Proposed Action. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on July 16, 2013. External scoping was conducted by posting this project on the White River Field Office's (WRFO's) on-line National Environmental Policy Act (NEPA) register on July 16, 2013. As of April 17, 2014 no comments have been received.

RATIONALE

Analysis of the Proposed Action has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health. Additionally, authorization to drill the proposed well would allow for the development of an oil and gas lease.

ADMINISTRATIVE REMEDIES

State Director Review

Under regulations addressed in 43 CFR 3165.3(b), any adversely affected party that contests a decision of the Authorized Officer may request an administrative review, before the State Director, either with or without oral presentation. Such request, including all supporting documentation, shall be filed in writing with the BLM Colorado State Office at 2850 Youngfield Street, Lakewood, Colorado 80215 within 20 business days of the date such decision was received or considered to have been received. Upon request and showing of good cause, an extension may be granted by the State Director. Such review shall include all factors or circumstances relevant to the particular case.

Appeal

Any party who is adversely affected by the decision of the State Director after State Director review, under 43 CFR 3165.3(b), of a decision may appeal that decision to the Interior Board of Land Appeals pursuant to the regulations set out in 43 CRF Part 4.

SIGNATURE OF AUTHORIZED OFFICIAL: Acting Field Manager

DATE SIGNED: 7/26/14